

**Student satisfaction with a blended learning
approach: implementation evaluation of three
Honours programmes in Education**



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Master of Philosophy in Higher Education in the Faculty of Education at
Stellenbosch University*

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DECLARATION

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ABSTRACT

Stellenbosch University (SU) has embraced the use of information communication technology (ICT) to improve student access and engagement with the goal of promoting lifelong learning across physical and socio-economic boundaries. In particular, blended learning provides a model which marries the application of technologies with the benefits of a face-to-face classroom setting. Blended learning can create alternative learning opportunities to make education more accessible, improve productivity in teaching and, most importantly, enrich learning experiences.

In 2013, the SU Faculty of Education (FOE) started to invest in blended learning by redesigning their Bachelor of Education (BEd) Hons programmes to create an innovative learning environment and improve student outcomes, while promoting flexibility for students and staff. However, the realisation of blended learning poses a number of important challenges which mirror those applicable to online education in the global academic community. In particular, there is a need to establish student satisfaction with blended learning compared to conventional teaching approaches as a critical aspect of curricular renewal and ongoing development.

In this study, the effectiveness of implementing a blended learning approach as part of the BEd Hons programme renewal process was evaluated, based in part on assessment of student satisfaction. Towards this goal, an applied, mixed method study design was selected, which combined elements of quantitative and qualitative approaches. All students enrolled in the BEd Hons programmes in 2017 (N=109) formed the population for the study, where a web-based, electronic survey (Student Satisfaction Questionnaire) was conducted and completed by a total of 32 students. The questionnaire measured satisfaction with learning material, support, interaction, programme content, interface, assessment, application and feedback. Structured interviews were also conducted with two programme coordinators, eleven lecturers, one tutor and three professional and administrative staff members to highlight their perspectives of student satisfaction with the implementation of the programmes.

The results show that there are factors that need improvement in order to achieve student satisfaction with blended learning such as to revisit 'at-risk' student support and to use standardised, straightforward and a user-friendlier online platform. Investment in the following key areas may further promote a successful sustainable blended learning

programme. **Firstly**, information technology training, accessibility and assistance. **Secondly**, development of effective blended learning material. **Thirdly**, ongoing professional development among students and academic staff. **Lastly**, defining the rights, roles and responsibilities of students and staff.

Keywords: Student satisfaction, blended learning, support, interface, learning materials, technology quality, interaction, assessment, feedback, ICT

OPSOMMING

Die Universiteit Stellenbosch (US) het die gebruik van inligting- en kommunikasietegnologie (IKT) aangewend om studentetoegang en -betrokkenheid te verbeter met die doel om lewenslange leer oor fisiese en sosio-ekonomiese grense te bevorder. In die besonder bied gemengde leer 'n model wat die toepassing van tegnologie met die voordele van 'n aangesig-tot-aangesig-klaskamer kombineer. Die gemengde leer-modus kan alternatiewe leergeleenthede skep om onderwys meer toeganklik te maak, produktiwiteit in onderrig te verbeter en, selfs belangriker, leerervarings te verryk.

In 2013 het die Universiteit Stellenbosch se Fakulteit Opvoedkunde begin om in gemengde leer te belê deur hul BEd Honneursprogramme te herontwerp om 'n innoverende leeromgewing te skep en studente-uitkomst te verbeter, terwyl buigsaamheid vir sowel studente as personeel tot voordeel strek. Die toepassing van gemengde leer het egter 'n aantal belangrike uitdagings na vore gebring, wat sommige van die uitdagings van aanlynonderrig in die globale akademiese gemeenskap, weerspieël. In die besonder is daar 'n behoefte om studentetevredenheid met gemengde leer, in vergelyking met konvensionele onderrigbenaderings as 'n kritiese aspek van kurrikulêre vernuwing en deurlopende ontwikkeling, te verbeter.

In hierdie studie is die effektiwiteit van die implementering van 'n gemengde leerbenadering as deel van die Hons BEd-programme se hernuwingsproses geëvalueer, wat gedeeltelik gebaseer is op die assessering van studentetevredenheid. Met hierdie doel voor oë is 'n toegepaste, gemengde-metode navorsingsontwerp gekies, wat elemente van kwantitatiewe en kwalitatiewe benaderings kombineer. Alle studente wat in 2017 vir die BEd Hons-programme ingeskryf het (N=109), het die populasie vir die studie gevorm waar 'n web-gebaseerde elektroniese vraelys (Studentetevredensvraelys) deur 'n totaal van 32 studente voltooi is. Die vraelys het bevrediging met leermateriaal, ondersteuning, interaksie, programinhoud, koppelvlak, assessering, toepassing en terugvoer gemeet. Gestruktureerde onderhoude is ook met twee programkoördineerders, elf dosente, een tutor en drie administratiewe personele gedoen om hul perspektiewe m.b.t. studentetevredenheid met die implementering van die programme uit te lig.

Die resultate toon dat daar faktore is wat verbeter kan word ten einde studentetevredenheid met gemengde leer te behaal, soos om studente ondersteuning te hersien en om 'n

gestandaardiseerde, en gebruikersvriendelike aanlynplatform te gebruik. Belê in die volgende sleutelareas kan verder 'n suksesvolle volhoubare gemengde leerprogram bevorder. **Eerstens**, inligtingstechnologie-opleiding, toeganklikheid en hulp. **Tweedens**, die ontwikkeling van effektiewe gemengde leermateriaal. **Derdens**, deurlopende professionele ontwikkeling onder studente en akademiese personeel. **Ten slotte**, definieer die regte, rolle en verantwoordelikhede van studente en personeel.

Sleutelwoorde: Studentetevredenheid, gemengde leer, ondersteuning, leermateriaal, tegnologiese kwaliteit, interaksie, assessering, terugvoer, IKT

OVERVIEW OF THE STUDY

The study consists of six chapters and seven addenda. Chapter One provides the orientation, motivation for and the scope of the study. Chapters Two and Three outline the background and context for the programme renewal process, blended learning environment and student satisfaction. Chapter Four explains the research paradigm, research approach and the chosen methodology. Chapter Five analyses the research results and their interpretation. Chapter Six relates the research results to my literature study, discloses the limitations of the study and shares future suggestions. The addenda contain the student survey questionnaire, facilitators' protocol, consent forms and research ethics committee approval.

In summary:

Chapter 1 outlines the background, study motivation, problem statement, study rationale, the study's aims and objectives and the scope of the study.

Chapter 2 provides an overview of programme renewal in higher education, with specific reference to the South African context, and the process and procedures followed for renewal of the Bachelor of Education Honours programmes.

Chapter 3 explores theoretical perspectives on blended learning, student satisfaction, national policy perspectives on the role of ICT in HE, institutional perspectives on the adoption of blended learning and the role of ICT for teaching and learning.

Chapter 4 provides a comprehensive overview of the research paradigm, the research approach and research methodology applied within the study.

Chapter 5 presents the students' baseline characteristics and reports on the descriptive analysis and thematic analysis of the data.

Chapter 6 shares the most important findings of this study, its benefits and adds to the existing body of knowledge by revising aspects that should be considered for the planning of programmes in a blended mode.

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LIST OF ACRONYMS

| | |
|-----------------|---|
| BEd Hons | Bachelor of Education Honours degree |
| CHE | Council on Higher Education |
| DHET | Department of Higher Education and Training |
| DoE | Department of Education |
| F2F | Face-to-face |
| FOE | Faculty of Education |
| HE | Higher Education |
| HEIs | Higher Education Institutions |
| HEQC | Higher Education Quality Committee |
| HEQSF | Higher Education Qualifications Sub-Framework |
| ICTs | Information Communication Technologies |
| LMS | Learning Management System |
| MRTEQ | Minimum Requirements for Teacher Education Qualifications |
| NQF | National Qualifications Framework |
| SAQA | South African Qualifications Authority |
| SU | Stellenbosch University |
| SUNLearn | Stellenbosch University Learning web-based platform |
| U-FE | Utilisation-Focused Evaluation |
| PQM | Programme and Qualifications Mix |

CHAPTER 1

ORIENTATION OF THE STUDY

1.1 BACKGROUND AND STUDY MOTIVATION

Since the late 1980's higher education institutions (HEIs) have found that students are no longer as successful as they used to be: students were failing or dropping out, and throughput rates were found to be much lower than previously (Haggis, 2009). Over the past twenty years much research has been done on why students are failing, and what student success means in terms of student persistence and retention (Fusarelli, 2004; Tinto, 2003; Tinto, 2006; Lewin & Mawoyo, 2014). This issue is further complicated by transformation and curricular restructuring in the digital age, taking into account global pressures as well as local realities (Cloete & Fehnel, 2002; Bitzer & Wilkinson, 2009).

The expanding global educational environment is expecting students to keep up with the latest developments in higher education (HE). International HE challenges correspond largely to those experienced in South Africa, including limited resources, massification and globalisation, the transformation of traditional HE to a more student-centred approach, innovative curriculum design, multidisciplinary courses and new teaching methods. Other prominent challenges in the current environment include the need for a paradigm shift away from teaching and in favour of learning, fostering student diversity and addressing decolonisation (Knight, 2004; Bitzer & Wilkinson, 2009). Indeed, there is a demand for quality teaching to proactively address student engagement and for innovative approaches to address the need for academic support (Naidoo, 2010; Evans, Muijs & Tomlinson, 2015). There is also a growing demand for greater student access with new enrolment policies, as well as for optimising student success and the provision of up-to-date programmes, while taking into account resource constraints in the South African HE setting (Rust & Gibbs, 1997; Evans et al., 2015). Inoue (2006) argues that HEIs should view the above-mentioned challenges as opportunities, as opposed to threats to the quality of the HE system. HEIs now investigate, for example, the "virtual" element in current course structures. Consequently, HE

plays a role in delivering lifelong learning and the development of cross-border “connectivity”, defining a continuing process of development of programmes through learning and re-evaluation. HEIs are responsible for guiding the student in how to learn and how to access information, while making a judgement of the information and reconstructing it into usable knowledge. HEIs should prepare the students to become life-long learners, because the workplace is changing, technology is developing and our lives are changing.

In this context, new courses and transformative teaching methods may be realised through the introduction of Information Communication Technologies (ICTs) and blended learning, which seek to relate teaching and learning more strongly to practical realities (Laurillard, 2009; Beetham & Sharpe, 2013; Jenvey, 2016). The concept of “blended learning” is broadly defined as a multi-layered hybrid between traditional face-to-face (F2F) and fully online course offerings, where the best elements of face-to-face are combined with technology use, and where the campus experience is enhanced through innovative communication technology. Blended learning can create alternative learning opportunities to make education more accessible, improve productivity in teaching, and most importantly, enrich learning experiences (Bath & Bourke, 2010; Gerbic, 2011; Gounari & Koutropoulos, 2013). The ultimate goal is to provide courses that are accessible, relevant, practical and immediately applicable with short, flexible timeframes, and to design an online learning environment to match the face-to-face offering and foster student engagement (Maürtin-Cairncross, 2014). Such an approach could potentially promote a deeper approach to learning, particularly for part-time students. Tinto (2003) stated that students need to collaborate more with one another in the learning process in order to engage the deeper approach to learning. Powell and Kalina (2009) and Kiraly (2014) validated this as the social constructivist approach to learning. Indeed, “blended learning labels the shifting venue and communication patterns that have occurred in the culture. We have moved from lecture halls to homes, cars, and iPods offering anytime, anywhere delivery while increasing interaction as well” (Albrecht, 2006:2).

Internationally, the increased use of ICT in HE helps to address the growing need for lifelong, “anywhere anytime” flexible learning opportunities by accommodating the more diverse new student cohort in terms of learning needs, age, preparedness for HE and levels of computer literacy. ICTs create new flexible learning opportunities, but the integration of

traditional delivery modes and innovative digital techniques remains a crucial issue for facilitators. Therefore, listening to the voices of both students and facilitators through continuous evaluation, reflection and the necessary support is important to ensure effective implementation (Webster, Peck, Do & Le, 2016).

In South Africa the White Paper on e-Education (RSA DoE, 2004:16) supports the development of ICTs “to create access to learning opportunities, redress inequalities, improve the quality of learning and teaching, and deliver lifelong learning. ICTs can accommodate differences in learning styles and remove barriers to learning by providing expanded opportunities and individualised learning experiences”.

From an institutional context, SU’s ICT strategy (Stellenbosch University, 2013) and vision include reference to “transforming education from the traditional methodologies and approaches to a more contemporary, open, responsive and flexible learning system”. The aim of SU’s e-campus strategy is to improve the delivery model and to create a more cost-effective teaching platform, called SUNLearn. Stellenbosch University (n.d.) describes SUNLearn as “an open source, powerful, flexible and mobile-ready blended learning platform for learning and teaching”, that offers qualifications to a wider geographically spread population by means of SUNLearn’s multimedia modules, co-operative learning instruments such as blogs, integration with social network technologies like YouTube, the production of podcasts, mobile learning strategies and even offline availability of content.

In the Faculty of Education (FOE), the conceptualisation of the blended learning BEd Hons programmes commenced in 2013, initiating staff development on blended learning for curriculum development in 2014, with the new programmes accredited in 2015 (BEd Hons programme committee, 2015; Stellenbosch University, 2017). The FOE took a decision in 2013 to invest in blended learning in the redesign of the new programmes for a number of reasons, including: (1) to rationalise staff time, as lecturers were teaching the very same programme in two modes - telematics and face-to-face; (2) exploitation of new markets, by providing for working education practitioners’ needs for further study with greater flexibility; (3) creating an innovative learning environment to stimulate and enhance student engagement and improve learning outcomes (Stellenbosch University, 2017). Blended learning is operationalised in the new programmes by means of a combination of two weeks of

compulsory face-to-face contact sessions held on campus during the school holidays (April and June-July), a two-hour telematic broadcast every Friday, and electronic learning using SUNLearn, the web-based learning platform. Programmes included in the present study have been re-curriculated with a view to improve teaching productivity to be more affordable, to accommodate a larger number of students, to improve learning and to provide effective learning opportunities to education practitioners.

One of the major changes from the previous programmes is that a compulsory research component was added to all Honours programmes.

1.2 PROBLEM STATEMENT AND STUDY RATIONALE

Blended learning is not a new term or practice in the South African HE postgraduate context. However, there is a need to identify to which extent the integration of learning technologies and the redesign of current teaching and learning practices in a different mode of delivery has already taken place at Stellenbosch University in general and in the Faculty specifically. Another part of the challenge is that the new programmes are offered in a new mode and the uncertainty of how students would experience it. Locally, blended learning remains relatively underdeveloped, and few studies have been performed in order to investigate the impact of blended learning on improving student satisfaction within a postgraduate environment.

Measuring student satisfaction can help identify factors that may need improvement in order to achieve enhanced student learning and assure the quality of the new blended learning BEd Hons programmes (Aldridge & Rowley, 1998). This study was guided by previous research studies and literature that investigated factors that impact student satisfaction in online and blended learning environments (Reinhart & Schneider, 2001; Wu, Tennyson & Hsia, 2010; Zhu, 2012).

1.3 RESEARCH QUESTION

The research question for the study was identified as follows:

How effective was the implementation of a blended learning approach in the three BEd Hons programmes (i.e. Hons in Educational Development and Democracy, Hons in Educational Support, and Hons in Language Education) based on an assessment of 1) student satisfaction and 2) facilitator perceptions?

1.4 STUDY AIM AND OBJECTIVES

The overarching aim of this study was to identify the level of student satisfaction with the first year of implementation of the new BEd Hons programmes, in order to make recommendations for further refinement and enhancement of the three programmes (i.e. Hons in Educational Development and Democracy, Hons in Educational Support, and Hons in Language Education).

To achieve this goal, the research objectives were identified as follows:

- 1) To determine how satisfied students were with the blended learning approach in the implementation of the BEd Hons programmes.
- 2) To evaluate facilitators' perceptions with regard to the benefits gained through the blended learning approach by the students in the implementation of the BEd Hons programmes.
- 3) To identify factors considered to contribute to or detract from students' satisfaction with the programmes.

1.5 RESEARCH METHODOLOGY

1.5.1 Research paradigm and research design

In the present study, a pragmatic paradigm whereby the primary goal is not to prove a particular hypothesis, but to solve a real-world problem, was utilised. In addition, emphasis was placed on refining processes, rather than on a critical evaluation of the programmes' future. Moreover, this was a formative evaluation study, focussing primarily on evaluating programme implementation and utilising a mixed method approach - with a quantitative and a qualitative component. "Formative evaluations are employed to adjust and enhance interventions. They are not used to prove whether a programme is worth the funding it receives but serve more to guide and direct programmes" (Royse, Thyer & Padgett, 2015:117). Patton's (2012) Utilisation-Focused Evaluation (U-FE) checklist was identified as an effective decision-making framework that helps select the most appropriate content, model and methods. Although Patton's (2012) U-FE checklist contains 17 steps, this research study integrated steps 7-17 as part of the evaluation process. Steps 1-6 were part of the re-curriculation process (refer to Addendum G). Research was guided by previous studies which investigated factors that influence student satisfaction in online and blended learning environments (Reinhart & Schneider, 2001; Wu et al., 2010; Zhu, 2012). The five factors that are likely to influence student satisfaction are students' interface, the learning community, learning materials, personalisation and the quality of technology. In broad, the evaluation focused on the individual, the programme and technology.

1.5.2 Selection of study population

The population consisted of the 2017 programme coordinators (n=3, including one acting coordinator for 2017), lecturers (n=11), a tutor (n=1), and professional and administrative staff members (n=3) involved with the implementation and students (N=109) enrolled in 2017 for the three specific BEd Hons programmes. The total group comprised students registered for Hons in Educational Support (n=70), Hons in Educational Development and Democracy (n=30) and lastly students registered for Hons in Language Education (n=9). The purpose of targeting the 2017 students was because they have formed perceptions of the blended learning process, experimented with blended learning and would be able to express their satisfaction with the blended learning implementation process. Therefore, purposive sampling was implemented to obtain the best data. The online questionnaire was distributed

to the students over a period of four weeks. Due to the conventional expectation of low online survey response rates in survey studies, two reminders were sent out two weeks apart on the Checkbox software known as SUNSurvey. Four percent were incomplete responses and 32 complete questionnaires (29%) were returned, which constituted valid responses for the statistical analysis. The programme coordinators, lecturers, tutors, professional and administrative staff members involved with the implementation were invited to participate in individual face-to-face interviews.

1.5.3 Data collection

This was a mixed method study which combined elements of quantitative and qualitative approaches, using composite viewpoints and the integration of data in a single study (Creswell, 2009). The quantitative primary data (low control) was systematically collected through a questionnaire survey. Qualitative secondary data (high control) was collected by analysing policies, the BEd Hons academic programme guide, minutes of meetings, blended learning guides, the modules available on SUNLearn as well as the narrative data from in-depth, individual interviews with three programme coordinators (including one acting coordinator for 2017), eleven lecturers (including the convenor for the compulsory module), a tutor, and three professional or administrative staff at SU Faculty of Education (Creswell, 2009).

1.5.4 Data gathering instruments

The quantitative data was gathered by using a 4-point Likert scale questionnaire survey. The survey instrument was adapted from the studies of Sun, Tsai, Finger, Chen and Yeh (2008), Palmer and Holt (2009) and Wang (2003). The questionnaire consisted of three sections: two sets of demographical data and 48 statements and three open-ended questions. The 48 statements were measured using a 4-point Likert scale beginning with 1 = strongly disagree to 4 = strongly agree.

In addition to this, individual interviews with the programme coordinators, lecturers (including the convenor for the compulsory module), tutor and professional and administrative staff members highlighted their perspectives of student satisfaction with the implementation of the programmes.

1.5.5 Data analyses

The gathered data was analysed in terms of the indicated aim and objectives of the study. The analysis was performed by the Centre for Statistical Consultation at Stellenbosch University. The data was analysed using STATISTICA (Dell Inc. (2017).

Thematic analysis was utilised due to its value as a “systematic and sophisticated” (Howitt & Cramer, 2008:341) approach to the analysis of qualitative data. Semi-structured interviews were conducted. The participants were asked to elicit their perspectives on the first year of implementation, and the interviews were audio-taped and transcribed. The lecturers and administrative staff members were asked to participate in their capacity as programme coordinators, lecturers, tutors, professional and administrative staff members. The data collection and analysis process are comprehensively described in Chapter Four.

1.6 APPROVAL AND ETHICS

The research proposal was approved by the MPhil Proposal Committee of the Centre for Higher and Adult Education in the Department of Curriculum Studies. Ethical clearance for the study was granted by the SU Research Ethics Committee (Humaniora) and institutional permission was granted by the Division for Institutional Research and Planning.

This study was viewed as a low-risk study as it included an online survey, the data was collected anonymously, and no demographic data, other than selecting the specific programme registered for, was collected. All voluntary participants were postgraduates and adults.

1.7 VALIDATING THE STUDY

Validity and reliability of the data, collected from survey respondents, was done using Cronbach's alpha. In testing the validity of indicators, each item can be classified as a valid item if it has a factor loading greater than 0.40, level of significance at 95%, and clustering in each group of variables. For the reliability test using Cronbach's alpha, coefficients and item-to-total correlation were used to test the reliability of each variable. The results of the reliability test indicated that all constructs have Cronbach's alpha value greater than 0.70, except for one with a value of 0.65.

Table 1.1: Guidelines for the interpretation of Cronbach's alpha coefficient value rating scale (Adapted from: Pietersen & Maree, 2007:216)

| | |
|------|----------------------|
| 0.90 | High reliability |
| 0.80 | Moderate reliability |
| 0.70 | Low reliability |

It can thus be assumed that the internal consistencies of the items in the questionnaires are acceptable. To understand the influence between variables, a standard p value of ≤ 0.05 was employed, suggesting that the independent variable significantly influences the dependent variable with a level of confidence of 95% and a maximum significance level of 5%.

1.8 SCOPE AND LIMITATIONS OF THE STUDY

The study amplifies module evaluations and student assessments of the BEd Hons programmes. The focus of this study was student satisfaction. Other aspects and objectives of the programme could be assessed in follow-up investigations, such as student engagement and student expectations.

The study was situated in the field of HE studies and focused on the outcomes and results of a particular implementation evaluation of three new blended learning BEd Hons programmes at SU. The evaluation of the programme was therefore contextualised within one institution and the results were not necessarily generalisable.

Limitations are weaknesses outside the researcher's scope and possible factors out of the investigator's control. Thus, to identify these weaknesses from the beginning has ensured that safety nets were built in. Potential limitations to the study would have been: the number of participants (an isolated group from the general population); whether the investigation would produce accurate results that would enable the researcher to draw conclusions; using a sample of convenience, as opposed to a random sample; using tools like surveys with the implication that the results of the data findings could be limited to the reliability of the test. Other limitations outside the researcher's scope are: characteristics of students (home language barriers); accessibility and location due to distance learning (reliable internet connection); time consuming interviews (unstructured interviews); limitation of data collection (not all students are equally articulate and perceptive); and resistance of experienced academic staff members to change, and their attitude toward this intervention.

1.9 LIST OF DEFINITIONS

For the purposes of this study, the researcher will be using the following definitions and, within this systematic evaluation process in the HE context, these concepts will be understood as follows:

Blended learning: A "combination of teaching modalities, a combination of teaching methods, and the combination of face-to-face and online teaching". For the purposes of this study, the third interpretation is used (Bonk & Graham, 2012:5).

ICT is the use of technology for information retrieval, storage and documentation; communication, e-mail, networking; training and development; edutainment; processing and dissemination of information; creating of new knowledge, etc.

Mixed methods: The use of both qualitative and quantitative methods to study phenomena. These two sets of methods can be used simultaneously or at different stages of the study.

Programme evaluation: The external quality assurance processes which are undertaken in order to make an independent assessment of a programme's development, management and outcomes (CHE, 2004).

Programme: Purposeful and structured set of learning experiences that leads to a qualification (CHE, 2004).

Quality is the combination of processes used to ensure that the degree of excellence specified is achieved (Nirhoo, 2002).

Quality assurance: Processes of ensuring that institutional arrangements for meeting specified quality standards or requirements of education provision are effective (CHE, 2004).

Stakeholder: A person or a group of people with a vested interest in a programme or an evaluation, including students, administrative staff, programme coordinators, lecturers.

Student satisfaction: The "favourability of a student's subjective evaluation of the various outcomes and experiences associated with education" (Elliott & Shin, 2002:198).

Utilisation-Focused Evaluation: A type of evaluation that focuses its design and implementation on use by the intended audience. The evaluator, rather than acting as an independent judge, becomes a facilitator of evaluative decision making by intended users.

1.10 CONCLUSION

This chapter has outlined the contextual background and content of the study. A motivation for the study was provided and the goal and objectives were stated. This was followed by a brief overview of the research methods employed in the current study. This study contributed to the FOE by giving feedback on students' and facilitators' expectations of blended learning. Therefore, listening to the voices of both students and facilitators through continuous evaluation, reflection and the necessary support is important to ensure effective implementation.

The next chapter, Chapter Two, will be providing an overview of the development and significance of HE with the focus on programme renewal.

CHAPTER 2

PROGRAMME RENEWAL IN HIGHER EDUCATION

2.1 INTRODUCTION

This chapter provides an overview of programme renewal in higher education (HE), with specific reference to the South African context, and with a focus on one higher education institution (HEI), and the process and procedures followed for renewal of the Bachelor of Education Honours (BEd Hons) programmes at the Stellenbosch University (SU) Faculty of Education (FOE). In particular, the rationale for programme renewal is discussed, as well as the national and institutional policies which govern this process. In addition, the procedures followed for programme renewal at the faculty, and the need for comprehensive stakeholder input towards ongoing quality improvement, are considered.

2.2 THEORETICAL PERSPECTIVES ON PROGRAMME RENEWAL

Massification of HE, accompanied by increased diversification, seems to be inevitable in an increasingly globalising world, with greater social mobility anticipated for a growing segment of the population (Altbach, Reisberg & Rumbley, 2009). Curriculum design should indeed, be closely aligned with efforts to further social justice and to promote participation in HE, while maintaining academic standards. There is also greater awareness of reorienting teaching around important knowledge questions relevant to all academic role-players as part of a social constructionist approach to learning (Bernstein, 2000; Maton, 2014; Ashwin, 2014). HEIs are faced with the challenge to widen student access, promote student engagement as well as creating opportunities for a more diverse group of educators and students. In particular, there is interest in the ‘decolonisation of the curriculum’ to ensure social and epistemic access for previously disadvantaged students. All of these factors drive the need for curricular review and transformation as a component of greater social responsiveness of HE (Amosun, Hartman, Van Rensburg, Duncan & Badenhorst, 2012). Indeed, tertiary institutions cannot ignore the demands for curricular reform central to transformation of HE. Programme renewal often ensues from such curricular reform.

Programme renewal defines the ongoing process of reviewing, adapting and implementing academic programmes in response to the educational and socio-economic needs of the communities in which the HEIs concerned are situated (Lai, 2011; Johnson & Morris, 2012; Bitzer & Costandius, 2018). A thorough needs analysis forms the basis of successful renewal of programmes, and ultimately the implementation of optimised ones (Geyser, 2004; Lai, 2011). However, there is also a need for feedback and reflection as part of the programme renewal process (Posner, 2004; Bournier, 2004; Desha & Hargroves, 2014). In this regard, Bitzer and Botha (2011) emphasise the importance of evaluating and analysing multiple sources of data (including curriculum maps, course results, enrolment statistics, student surveys and lecturer consultations) to evaluate the product and to inform the programme renewal process.

Several theoretical models have been developed to help inform and guide the programme renewal process. For example, Figure 2.1 proposes a cyclical model underscored by the need for stability to cope with the ever-changing dynamic learning environment (Muijs & Reynolds, 2005; DeLuca, Poth & Searle, 2009; Stefani, 2009; Bitzer & Costandius, 2018). In this context, the application of such a model may promote ongoing improvement through a continuous process of renewal (Geyser, 2004; Stefani, 2009). In the cyclical model, the process of programme renewal starts with preparation (step 1), in which the necessary policies and management documents are considered in order to guide informed decision making. Next, the identity of the specific programme is formulated in keeping with the institution's vision, mission and expectations (stage 2). An analytical framework is then created (stage 3), with pedagogical strategies reflected upon (stage 4), while assessing (stage 5) and evaluating (stage 6) the course material. Lastly, feedback is provided to make decisions before implementing the changes (stage 7).

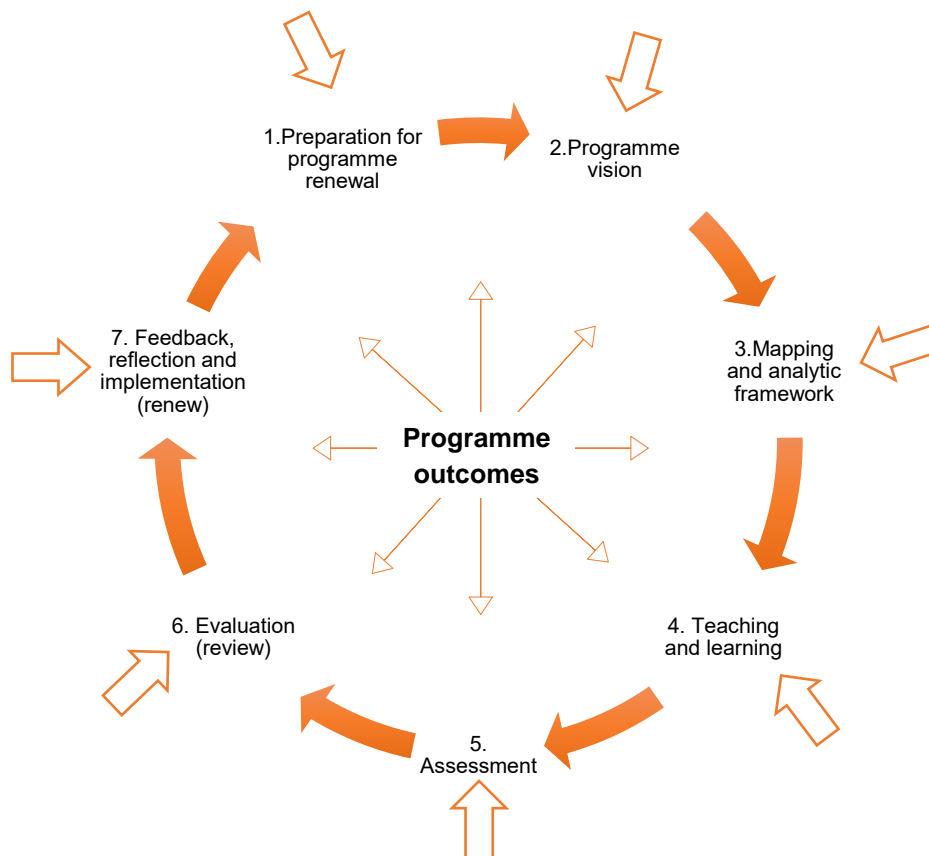


Figure 2.1: A process model of programme renewal (Adapted from: Muijs & Reynolds, 2005; DeLuca et al., 2009; Stefani, 2009; Bitzer & Costandius, 2018)

In comparison to this, an alternative model provides a different perspective on the process required for effective programme renewal. This model stresses the importance of an initial needs analysis to ensure alignment with the needs, outcomes and expectations of students, educational bodies and society at large (Geyser, 2004; Biggs & Tang, 2007; Du Toit, 2011; Lai, 2011; Johnson & Morris, 2012). Throughout the renewal process, there is a focus on the delivery of content, knowledge development and student learning (Biggs & Tang, 2007; Jansen, in Bitzer, 2009; Ashwin, 2014; CHE, 2014; Carl, 2017). In this context, programme renewal goes beyond a focus on content and is influenced and affected by projected outcomes (Carl, 2002; Barnett & Coate, 2004; Desha & Hargroves, 2014). Quality assurance is a key component of programme renewal (Lai, 2011; RSA DHET, 2013a; Bitzer & Costandius, 2018) as a way of ensuring module consistency and encouraging reflective practices (Le Grange, 2006; McDonald & Van der Horst, 2007; Garrison & Vaughan, 2013). The four domains that constitute quality assurance are 1) the adoption of student-centred approaches, 2) programme design that can reflect a command of the field, 3) scholarly activities and approaches to learning and teaching, as well as 4) past/present achievements and leadership

in teaching. Feedback from all stakeholders is further considered imperative to ensure that programme renewal takes into account developments in the particular discipline and the broader academic community (Carl, 2017). Lastly, evaluation is a core component of this model.

To conclude, the BEd Hons programme developers followed a similar cycled model for the basic renewal procedure of the three BEd Hons programmes to ensure quality. The programme developers had to prepare for the renewal process by submitting relevant documents, explaining the programmes' vision (aligned with the vision of the institution) and how the outcomes would be achieved, doing the mapping, preparing the analytical framework, doing assessment and evaluation and taking into account feedback received (from the faculty, the institution and nationally).

2.3 NATIONAL POLICY IMPERATIVES FOR PROGRAMME RENEWAL

Multiple national policies have been developed to support transformation of South African HEIs (RSA DoE, 1997a; 1997b; Bitzer & Costandius, 2018) and to provide a basis for programme renewal efforts (RSA DHET, 2013b; CHE, 2014). The Higher Education Act of 1997 allocated the HE quality assurance task to the Council on Higher Education (CHE) (RSA DoE, 1997a; 1997b). The Higher Education Quality Committee (HEQC) was established as a permanent sub-committee of the CHE under the Higher Education Act of 1997 (RSA DoE, 1997a; 1997b) and operates within the framework of relevant policies and regulations. The HEQC is assigned to do institutional audits, programme accreditation and quality promotion, in addition to providing information and doing capacity development around quality assurance (CHE, 2014). The HEQC is responsible for quality assurance at the national level, including the review and accreditation of academic programmes based on stipulated criteria for minimum acceptable standards (RSA DHET, 1997; CHE, 2014), including those related to stakeholders' needs, the institutional landscape, international trends and national policies (CHE, 2004).

The Accreditation Committee, which is an HEQC appointed committee, consists of a peer review panel responsible for evaluating whether new programme proposals are compliant with accreditation criteria and standards (CHE, 2004). These criteria serve as an evaluation

tool to set the standard for quality in HE and allow institutions to re-accredit programmes based on the review process. The development of review criteria was based on national policies, as well as institutional standards for efficiency. Important aspects considered by the review committee include the need for increased enrolments, greater research productivity and outputs, as well as support for electronic and distance learning.

The CHE is in charge of overseeing the Higher Education Qualifications Sub-Framework (HEQSF) as well as advising the Minister of Higher Education and Training on matters relating to quality, standards and credibility. Once the HEQC has peer-reviewed and accredited a programme, the South African Qualifications Authority (SAQA) registers the new programme on the National Qualifications Framework (NQF) which is the umbrella structure for three separate sub-frameworks as approved by the CHE (RSA DHET, 1997; 2013a). The NQF is described as a “single integrated system for the classification, registration, publication and articulation of quality-assured national qualifications” as specified in Section 4 of the NQF Act (Act No 67 of 2008). The three sub-frameworks of the NQF are the General and Further Education and Training Sub-framework, the Higher Education Sub-framework, as well as the Sub-framework for Trades and Occupation. The qualifications framework consists of level and qualification descriptors, formulated in terms of learning outcomes and measured in volume of notional learning needed to reach the outcomes. The framework is designed to be compatible with international frameworks. The NQF aims to enhance quality and access to learning, thereby creating an integrated national framework to address issues of past unfair discrimination (Section 5, NQF Act). Furthermore, the NQF strives to contribute to the students’ personal development by fostering and maintaining a transparent national framework (CHE, 2013).

Overall, the rationale for this approach to programme accreditation and registration lies in protecting students against poor quality education and ensuring the credibility of each qualification (CHE, 2004). The accreditation process takes into account quality issues relating to adaptability and innovativeness of academic programmes, and in the event that programmes fail to adhere to quality standards, or when issues relating to staffing and learning assessment practices arise, accreditation may be withdrawn (CHE, 2014). National reviews are an important mechanism used by the HEQC to gather information on specific

programme areas. For example, a national review found that four South African universities were at risk of losing their LLB programme accreditation (Quinot & Van Tonder, 2014).

In South Africa, higher education institutions (HEIs) are faced with a number of important challenges, including the need to implement transformative practices aimed at broadening access to “new knowledge markets” and improving work-readiness among students (Jansen, in Bitzer, 2009; Holtman & Marshall, 2008; Garrison & Vaughan, 2013; Ashwin, 2014; Stellenbosch University, 2017-2022). In particular, there is a need to support greater access to HE without compromising the quality of learning and of academic programmes, which must be maintained in order to maintain and improve success rates (RSA DHET, 2013a). The first CHE audit cycle (2004-2011) sought to ensure that mechanisms are in place for improvement and monitoring (CHE, 2014), while the second quality assurance cycle focused on improving student success. The Quality Enhancement Project (QEP) provided a platform for institutions to share good practices and create a culture of evidence-based decision-making. These quality enhancement procedures covered four focus areas of the CHE’s QEP during the first phase from 2014-2015 (CHE, 2014:8). HEIs should continue to place due emphasis on continuous improvement to sustain quality standards as a component of transformation (RSA DHET, 1997; Bitzer, 2009; Neumann & Tan, 2011; Garrison & Vaughan, 2013).

The restructuring of academic programmes is of major importance in promoting flexibility for different levels of student preparedness, emphasising academic relevance, improving student access and success, and accommodating the growing ‘learn-and-earn’ market (RSA DHET, 1997; CHE, 2013; Stellenbosch University, 2013-2018; Stellenbosch University, 2017-2022). Student success refers to “enhanced student learning with a view to increasing the number of graduates with attributes that are personally, professionally and socially valuable” (CHE, 2014:1). In this context, HEIs should seek to develop and implement the most appropriate models for programme renewal to address these needs while also meeting national policy requirements and adhering to professional standards (Fox, 2009; Lai, 2011).

2.4 INSTITUTIONAL POLICIES AND PROCESSES FOR PROGRAMME RENEWAL

At SU programme renewal has been closely tied to the demand for the implementation of blended learning as an instructional approach that complements the traditional face-to-face

approach with some online instructional time, by means of using the best of face-to-face and online activities (Allen & Seaman, 2008). Research has established that students enrolled in blended learning classes show higher achievement academically compared to their counterparts, who are subject to fully online or face-to-face courses (Means, Toyama, Murphy, Bakia & Jones, 2010). Student satisfaction is also higher in blended courses when compared to traditional lecture courses (Martínez-Caro & Campuzano-Bolarín, 2011). In addition, institutions are able to increase enrolment without the need for the construction of new facilities, because classroom space can be more efficiently utilised (Dziuban, Hartman, Cavanagh & Moskal, 2011).

The successful implementation of blended learning is dependent on strategic alignment of institutional, faculty and student goals, which cannot be achieved without dialogue among all academic stakeholders. A common vision for the faculty is needed, consistent with the broader institutional vision for programme renewal, curricular redesign and transformation (Carbonell, Dailey-Hebert & Gijssels, 2013). Institutional frameworks should be established to ensure that key criteria are met to ensure the success of blended learning initiatives, including improved student learning and greater student engagement (Lai, 2011; Garrison & Vaughan, 2013; Owston, York & Murtha, 2013). The notion of alignment of institutional goals and coherence is not a new concept (e.g. Goldman cited in Owston, 2013), and introducing blended learning into the academy is not unlike introducing any kind of innovation into existing organisations. However, bottom-up change cannot occur without a supportive senior administration and an institutional culture that values and supports pedagogical experimentation (Fry, Ketteridge & Marshall, 2008; Lai, 2011). In this context, the success of blended learning is further predicated upon committed collaborative leadership that engages all levels of the institution (Garrison & Vaughan, 2013). Furthermore, a robust technical infrastructure must be in place, as well as convenient and sufficient technical support for the lecturers and students. Lastly, it is important to ensure monitoring of success over time to inform policy development.

In the context of SU, existing guidelines stipulate that programmes must be reviewed on an annual basis (Stellenbosch University, 2017). Vice-deans and representatives from all faculties are tasked with identifying programmes for monitoring to ensure that material is relevant, that learning assessment remains fair and that content is in keeping with the current educational milieu (Stefani, 2009). Instructional material should be reviewed periodically to

meet programme outcomes (Bitzer & Costandius, 2018), which should align with current quality standards. Structured processes (including renewal roadmaps) have been developed to inform decision making concerning renewal procedures and to ensure that action is taken to address identifiable problems (Stefani, 2009; CHE, 2013). Multiple workshops have also been introduced to support continuous development and improvement. Overall, a supportive campus climate with adequate resources and a clear organisational structure underscore effective programme renewal (Stefani, 2009; Du Toit, 2011; Carl, 2017; Bitzer & Costandius, 2018). Therefore, SU should sustain an institutional focus and share good practice throughout the programme renewal process across different faculties (Garrison & Vaughan, 2013; Stellenbosch University, 2016).

2.5 RENEWAL OF BEd HONS PROGRAMMES AT THE STELLENBOSCH UNIVERSITY FACULTY OF EDUCATION: BACKGROUND AND RATIONALE

The SU Faculty of Education (FOE) is an academic institution committed to professional excellence, quality education, effective support and lifelong learning through research. In particular, the FOE seeks to expand postgraduate studies to ultimately contribute to the national focus on restructuring and developing teaching and training opportunities (CHE, 2014; Stellenbosch University, 2018b).

The primary rationale for renewal of the FOE Hons programmes was based on amendments to the Minimum Requirements for Teacher Education Qualifications (MRTEQ) policy (RSA DHET, 2013b). These amendments, amongst other things, required BEd Hons programmes to include a mandatory research component, in keeping with national policies aimed at promoting quality assurance (RSA DHET, 2013a; Thaver, Holtman & Julie, 2013). Previously the Honours programmes at the FOE were not aligned with the Higher Education Qualifications Sub-Framework (HEQSF) stipulation that all Hons programmes must have a compulsory research component of at least 25% (30 credits).

Several Honours programmes are available as an optional fifth year at the FOE, with the aim of developing research capacity and supporting ongoing postgraduate studies. The BEd Hons programmes were developed to further the academic study of Education by introducing students to knowledge and skills aimed at deepening their thinking on pedagogical practices at the micro- and macro-level (Ashwin, 2014). In this context, the Honours programmes are

the initial qualification for students aiming to specialise in Education (Stellenbosch University, 2018b). The programmes further seek to provide students with a platform for postgraduate studies to enhance their professional competency in keeping with ongoing changes and developments in the field of education (Stellenbosch University, 2018b). The Honours programmes provide an opportunity to induct students into the academic research culture (Thaver et al., 2013) and demand “a high level of theoretical engagement and intellectual independence” (CHE, 2013:71).

Additionally, in 2013, the FOE decided to invest in a blended mode of delivery as part of redesigning and renewing the Honours programmes, which were internally approved in 2014, initiating staff development into a blended approach for curriculum development. External accreditation was obtained in 2016, and the renewed programmes were implemented from 2017 onwards. The BEd Hons committee had chosen this specific blend of block contact sessions, telematics sessions and online learning, as discussed in Chapter One, as SU is a contact education institution, which therefore had to satisfy the requirements of the Policy on Distance Education (RSA DHET, 2013b) for minimum contact time of 25%.

The BEd Hons programmes are three separate programmes but their modes of presentation are the same combination of telematic, contact sessions and online presentation. Blended learning is operationalised in the new programmes by means of a combination of two weeks of compulsory face-to-face contact sessions held on campus during the school holidays (April and June-July), a two-hour telematic broadcast every Friday, and electronic learning using SUNLearn, the web-based learning platform.

The BEd Hons programme renewal design decisions were made by the BEd Hons committee, firstly to meet the new policy requirements. The BEd Hons committee attempted to balance various factors, such as the exploitation of new markets, by providing for working education practitioners’ needs for further study with greater flexibility. Whereas the committee wanted to exploit the 'learn-and-earn' market, the new programmes still had to satisfy the requirements for contact education. To a large extent the move towards blended learning was a pragmatic decision to both satisfy policy requirements and provide more flexible learning opportunities for working adults.

2.6 PROCEDURAL OUTLINE OF BEd HONS PROGRAMME RENEWAL AT THE FACULTY OF EDUCATION

The basic procedure utilised for renewal of the FOE BEd Hons programmes at faculty, institutional and at national level is illustrated in Figure 2.2. Overall, programmes need to be approved by the faculty programme committees, the Institutional Programme Advisory Committee (PAC) and Faculty Board. Their recommendations would then go to the Academic Planning Committee (APC) and Senate. The Centre for Academic Planning and Quality Assurance (APQ) provides the link between the faculty programme committee, (institutional bodies (PAC, APC, Executive Committee of Senate and Senate) and the three external, national quality bodies (DHET, HEQC and SAQA).

As pointed out above, the FOE had to renew the former residential specialised postgraduate programmes to meet regulatory requirements. The quality assurance process is challenging, since approval needs to be provided at both national and institutional levels. Programme coordinators completed comprehensive submission documents in consultation with the Centre for Teaching and Learning (CTL) and the Centre for Academic Planning and Quality Assurance. The documents included a brief justification for the programmes, programme rationale, purpose and intended outcomes as well as enrolment plans, amongst others. Programme and module forms then served at the Faculty's BEd Hons Programme Committee, the Faculty Standing Committee for Teaching and Learning, the Faculty Committee and at Faculty Board before they could be sent to the institutional Programme Advisory Committee (PAC). The PAC prepared recommendations and advised the Academic Planning Committee (APC). Following this approval, the APC made recommendations to the Executive Committee of Senate and Senate. The revised programme proposal and advisory reports were tabled for approval and confirmation by Senate. After approval, the Centre for Academic Planning and Quality Assurance (APQ) submitted the new programme proposals to the external bodies.

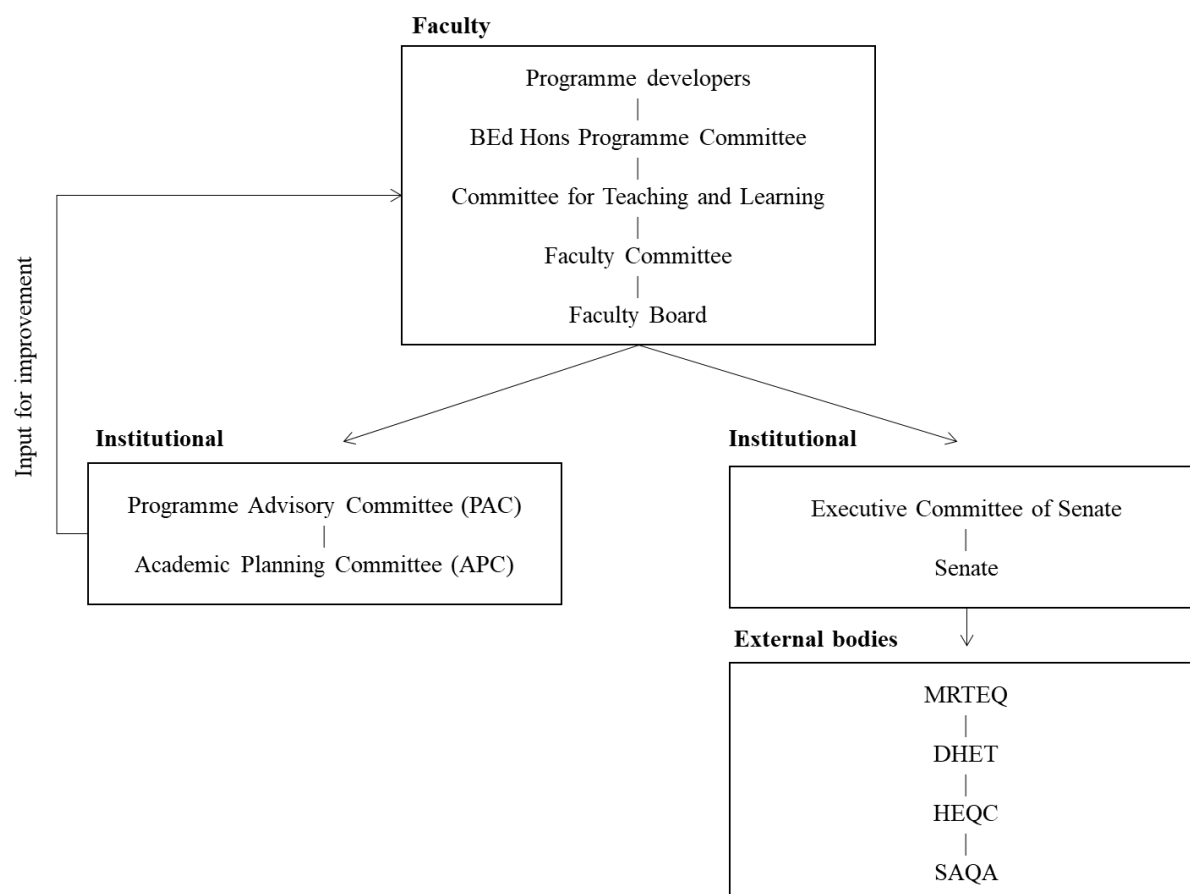


Figure 2.2: Schematic outline of procedure followed for renewal of the BEd Hons programmes at the Stellenbosch University Faculty of Education

The proposal was then sent for approval based on MRTEQ requirements (RSA DHET, 2013b). These policy requirements include a clear indication of the different types of teacher qualifications, minimum and maximum number of credits at respective NQF levels, definitions of practical learning and the learning requirements for basic teacher education programmes. This process checks that the programme adheres to all the requirements prescribed in the policy (NQF levels, credit allocation, types of learning, Work Integrated Learning, etc.). Only after the programme has been approved by the joint committee of the Department of Basic Education (DBE) and the Department of Higher Education and Training (DHET), who oversees MRTEQ, can the programme be submitted to the DHET. The MRTEQ committee can also refer a programme back (which often happens) for more information.

The DHET has to consider the programmes with regard to the SU's Programme and Qualification Mix (PQM). Seeing that BEd Hons programmes had been included in the SU PQM previously, this did not pose any problems.

This is followed by submission to the HEQC for accreditation and then to SAQA for the registration on the National Qualifications Framework (RSA DHET, 1997; CHE, 2004). Should any of the three external bodies refer programmes back for certain conditions to be met, the APQ will be in correspondence with these national bodies. SU may only start marketing and offering the new programme once the APQ has received a SAQA ID number (RSA DHET, 1997). Throughout the renewal process, the APQ plays a supportive role, although it is not a committee itself. The procedures followed at FOE are in keeping with the process model outlined by Stefani (2009), from the preparation to the continuous process of feedback and reflection workshops, before the implementation of new programmes could start.

2.7 CONCLUSION

The process of programme renewal is an important function of HEIs to ensure quality improvement in South Africa. The SU FOE underwent a process of renewing its BEd Hons programmes driven by a needs assessment, evaluation and feedback. Programme renewal includes the feedback of all stakeholders, including academics, administrators and institutional bodies. In addition, programme renewal should align with national policies and imperatives for quality assurance and improvement (RSA DHET, 1997). In this context, ongoing research is required in order to establish satisfaction of the renewed programme among current Honours students at the faculty. In addition, the perceptions of this renewed programme should be assessed among staff members and course facilitators.

CHAPTER 3

BLENDING LEARNING AND STUDENT SATISFACTION

3.1 INTRODUCTION

Blended learning attempts to address many challenges facing higher education institutions (HEIs), including the need to embrace information and communication technologies (ICTs) as a component of transformative practice. It is important to establish to what extent the incorporation of ICTs, as part of a blended learning approach, affects student satisfaction as a determinant of persistence and academic outcomes. In addition, the efficacy of blended learning as utilised by academic staff across different faculties should be assessed. This chapter will explore some theoretical perspectives on blended learning, student satisfaction and national policy perspectives on the role of ICTs in HE and furthermore perspectives at institutional level, in particular on the adoption of blended learning and the role of ICT for teaching and learning. To conclude, the faculty rationale for the adoption of a blended learning approach for the new BEd Hons programmes will be discussed.

3.2 LEARNING TECHNOLOGIES IN HIGHER EDUCATION

3.2.1 What is technology?

Technology can be described as both the cause and solution for today's rapidly changing educational milieu, with students who are geographically spread out and more diverse than in the past, and for the so-called mobile population who seeks a high level of flexibility and self-directed learning (Cronje, cited in Rushby & Surry, 2016).

An obstacle defining technology within learning technology and the role technology plays, is the wheel being reinvented and renaming itself every few years. The lack of theorisation in many variants of the terminology makes the term 'learning technology' vague and largely ungrounded. For example: terms used in research are educational technology, computer-assisted learning, e-Learning, blended learning, online learning, information and communication technology, and so forth. Too many theories of technology create a

vagueness, as academics research and divide their focus between “all kinds of technology”, “emerging technologies” and “digital technologies, instead of characterising what technology is (Oliver, cited in Rushby & Surry, 2016). For this reason, stakeholders need to carefully consider choices and not injudiciously adopt key technology trends in HE, such as Facebook, being the social element on the virtual campus. Examples of earlier technologies were those of the textbooks and typewriters getting integrated with digital computers, massive open online courses (MOOCs) and iPads. A major concern with these innovative learning technologies is whether HE can adapt and accommodate rhizomatic learning, ensuring coherence throughout the integration process. HE needs to move away from a “one-size-fits-all lecture driven model [...to] individual scholar-tutor relationship, but the tutor being technology enhanced by a learner management system” (Cronje, cited in Rushby & Surry, 2016:138). HE needs to strive to offer a curriculum that gives students a high level of choice to develop their own sets of skills to ensure graduate attributes and job readiness. Buckingham (2013) stated that technology is merely seen as the delivery mechanism, transferring knowledge with the emphasis on a mechanism that needs to be applied and practical. The focus should move from technology as an instrument to De Vries’s (2013:19) version, namely to think about “technologies as knowledge” and value-based. Moreover, learning technologies are not just a device that links tools and practices, but vital for the forming of knowledge that is efficient, effective and accessible for all stakeholders. Technology is unavoidably changing society, the learning environment and the stakeholders’ understanding thereof. Learning technologies are seen as an intervention in practice, therefore lecturers will have to rethink their practices (Oliver, 2011).

Technology adoption can be seen to follow one of the following approaches: approaches to a cause, instantiation of theory, a network effect and as a “technical system within social systems” (Oliver, cited in Rushby & Surry, 2016:49). The former approach embraces cybernetics, which Laurillard (2009) extensively wrote about, namely the conversational framework that suggests a series of exchanges amongst the lecturer, student and their peers. SU will use this technology approach (ICT technology infrastructure) to widen access by serving more non-residential students, using ICT for a more relevant and improved learning experience and, lastly, with the focus on effective assessment.

3.2.2 Learning technologies at Stellenbosch University

Learning technologies (also known as educational technology) have the potential to support learning across physical borders. In particular, the academic milieu is now faced with multiple technological options, ranging from simple (e.g. linear video, films, print) to complex (e.g. virtual classrooms, mobile-learning, webinars). However, in contrast to a classroom-based model which requires relatively little investment, the introduction of ICT as a component of blended learning necessitates significant financial investment and additional resources. Stakeholders may therefore be unsure about the short-, medium- and long-term returns when investing in emerging learning technologies (Rushby & Surry, 2016). In addition, it is difficult to guarantee equal access to essential technologies in resource-limited settings such as South Africa (Cronje, 2018). This equity gap can contribute to inequality between students with technological access and those with insufficient access, compounded by frail fixed-wire telephone systems and lack of high-capacity broadband in rural areas (Jones & Bridges, 2016).

A decade ago SU used the learning management system, called Webstudies, which was the e-Learning equivalent on campus. Since then SU migrated all the old modules to the new learning management system (SUNLearn) to create more meaningful and enriching teaching and learning experiences for residential and non-residential students. Furthermore, SU invested in multipurpose, high-quality technology to upgrade the classrooms, improve the students' learning experience and diversity. The institution started using more emerging learning technologies (Google applications, Twitter, clickers), e-content (e-textbooks, vodcasts, simulations) and computer application), co-operative learning instruments (blogs and wikis), submission of assignments in e-format (Turnitin), electronic recordings (podcasts and telematic broadcasts) and mobile learning strategies (cell phone applications and tablets) to promote collaboration inside and outside the classroom, but also to make content more accessible. In addition to the above learning technologies, SU also focusses on 'learn-and-earn' non-residential students across South African borders, offering a technology platform which includes a hybrid approach (satellite and telematic broadcasts), mobile and SUNLearn. These hybrid programmes allow the building of partnerships with students from rural areas and with other universities and organisations, supporting postgraduate students, high school teachers and other in-service trainees.

It is vital for SU's technology infrastructure to remain reliable, user-friendly and to upgrade the technical platforms such as desktop computers, laptops and tablets, the learning management system, satellite broadcast facilities, video streaming, electronic textbooks and class notes as well as student network access on the SU campus.

3.2.3 Challenges and opportunities with learning technologies and its 'tools'

Academics need to buy-in on a large scale to make it possible. If not, lecturers will be overloaded and demotivated to integrate the use of ICT. Furthermore, the uncertainty about how to integrate and introduce learning technologies successfully, viz. open education sources, poses a challenge in avoiding plagiarism. Moreover, guidance and support on how to use Twitter, Facebook and other social networks productively in the context of teaching and learning is necessary. In addition is the importance of high quality multimedia technology that needs to be reliable, maintaining up-to-date software, providing excellent connectivity and immediate support, having in mind the diverse student digital literacy skills set and students readiness. Lastly, the systematic integration of content, pedagogy and technology tools is of importance (Hughes, 2007; Hofmann, 2011; Partridge, Ponting & McCay, 2011; Kaur, 2013; Owston, 2013).

Picciano (2009) highlighted that one of the major benefits of the learning technologies is that it allows the student to engage in their preferred medium (or interest, or ability) to study, interact but also challenge them to study in another way. In particular, if one looks at the diverse student that “represent different generations, different personality types and different learning styles, teachers and instructional designers should seek to try to use multiple approaches” (Picciano, 2009:7)

3.2.4 The impact and relationships with academics and students

An important part of this study is the impact that a blended learning approach (i.e. the integration of technology) has on the role players (e.g. Students and lecturers). Therefore, the focus throughout the implementation process of learning technologies should be on the ‘actors’ and their roles, responsibilities and commitment; those that create (developers), those who implement, present and master the learning material (lecturers), and the individuals (students) that use the learning technologies (Graham, Woodfield & Harrison, 2013). The emphasis should be on lecturer-student interaction throughout the learning process, where both the lecturer and student need to share the responsibility. Studies have shown that

students learn best when actively engage and construct their own knowledge (Laurillard, 2009). Sims, Dobbs and Hand (2002:32) concur by stating “interactivity is an essential component for the successful implementation” of blended learning. Therefore, the lecturer’s responsibility is to lower the barriers for learning, based on its effectiveness (viz. related learning activities, assessments are aligned to the learning outcomes, clearly outlining instructions and expectations). The student’s responsibility is to participate by engaging in the learning activities. Blended learning is seen as a ‘game changer’ in HE but the ‘role players’ might not always appreciate the change, particularly students who are mostly interested in passing the exam. To assist the students with the transition, the lecturer needs to spend time explaining the rationale of the improved programme, giving the students time to reflect and explain the role they need to play in the teaching and learning process. In practice, these roles can become blurred, for example when the lecturer is also the creator, or when students are responsible for constructing their own learning resources (Rushby & Surry, 2016).

There are mixed opinions among stakeholders relating to the role that learning technologies need to play in HE, being it to add value and playing a supporting role to teaching and learning, or the inseparable link to a more comprehensive learning experience for the students. Secondly, there are mixed opinions whether the “new image” of a technologically advanced HEI will influence and strengthen the corporate identity of SU for the better. Thirdly, there is the issue of the effect that the technology intervention will have on the quality contact time between student and lecturer. Lastly to be mentioned is the impact that learning technology will have on the student-lecturer interaction and feedback (Collopy & Arnold, 2009; Hofmann, 2011; Carbonell et al., 2013; Garrison & Vaughan, 2013).

In the next section, the combination of these learning technology characteristics with the preferred face-to-face practices will be shared to create the best blend for a unique HEI teaching and learning environment. Blended learning is the combination of learning technologies which allows the student to do the coursework and assignments online, but offers a blend to strengthen the relationships through face-to-face interaction and networking. The following section gives an overview of the potential benefits and challenges of blended learning and the different types of models a HEI could consider.

3.3 THEORETICAL PERSPECTIVES ON BLENDED LEARNING

Blended learning is also known as hybrid learning, merging of the physical and virtual spaces. There are several blended learning models today in HE, such as Station rotation, Lab rotation, Remote blended learning, Flex blended learning, Flipped classroom, Self-blend rotation, and so forth. Each blend can change due to the fuse of online instruction with a traditional face-to-face classroom (Picciano, 2009). A short description of each ‘blend’ will be discussed later. The blend should be made simple, but unique and complex, and tailor-made for each HEI according to the stakeholders’ needs. For example, the ratio between these two poles are interchangeable, the bulk of the instructions might be given in class with a few additional activities online, or the class can be presented online with two contact sessions a year on campus (Collopy & Arnold, 2009; Bonk & Graham, 2012). The HEIs should be cautious which blend the institution selects, since the programme should be well-suited to the needs of all stakeholders (Collopy & Arnold, 2009). In the next section a few of the blended learning models will be discussed, ranging from experimental forms of blends to the standard flipped classroom model (Singh, 2003; Graham, 2006).

Firstly, there are the two opposites, the *blended face-to-face* class where the traditional classroom is the ‘driver’ of the model with a few online quizzes, compared to the *blended online class*, which is mostly managed through online activities (Picciano, 2009). For the purpose of this study, the blended online class is the ‘driver’ of the model with two contact sessions per year. Secondly, there is the reverse traditional classroom where the students prepare for the class in their own time, followed by class discussions, known as the *flipped classroom approach*. Thirdly, there is the *rotation model* where the student rotates between modes of delivery and modes of location on campus and within the virtual classroom. Furthermore, there are the *self-blend models* where students have the freedom to choose for which modules they want to register for a specific semester. In addition, there is *the blended MOOC flipped classroom* approach - using in-class meetings to enhance open education; students select open access study material but discuss problem-solving face-to-face. Also to be mentioned are the *flexible mode courses* where students shop for their ideal programme between multiple modes of face-to-face and online options. Lastly, the blended learning models keep evolving; there is not a static list but rather a menu with ‘al la carte’ options for

institutions to select according to the students', academics' and institutions' needs (Welker & Berardino, 2005; Picciano, 2009).

There is increasing interest in blended learning, both in research settings and teaching practice, as a means of enhancing the learning experience by connecting students to the academic community and fostering collaboration across time and location (Drysdale, Graham, Spring & Halverson, 2013; Halverson, Graham, Spring, Drysdale & Henrie, 2014). Blended learning seeks to create opportunities to engage students in ways not possible with conventional face-to-face teaching strategies (Bath & Bourke, 2010). In the HE setting, blended learning helps integrate different didactical and pedagogical approaches in a manner which retains the benefits of face-to-face learning and the opportunities provided by an online delivery platform (Lai, 2011). In particular, there is interest in the value of blended learning as a model for integration of ICT as a component of teaching towards transformation of HEIs.

Blended learning may enhance the teaching experience, accommodate off-campus and distance-learning students, and save both resources and time in the long-term. Indeed, academic staff are keenly motivated by the potential of the teaching experience to be enhanced by encouragement of active learning, promotion of quality feedback and development of student skills, including graduate attributes and digital literacy (Vasileiou, 2009; Canterbury University, 2010; Partridge et al., 2011). Also, the role of the student as consumer is emphasised in a blended learning environment (Vasileiou, 2009). Student feedback and input is valued towards curricular design and improvement, while emphasis is placed on interaction with other students and staff (Sheldon, 2018).

One of the most important advantages of blended learning is that it is student-centred and can be done anytime, anywhere (Holmes & Gardner, 2006). Blended learning provides for individual support, enabling a richer, more interactive learning experience (Vasileiou, 2009; Kaur, 2013). Also, blended learning provides more time for teamwork and is ideal for on-the-move training. Moreover, blended learning allows for instant information sharing (Sharma & Barrett, 2007). In addition, blended learning supports flexibility, independence and convenience (Welker & Berardino, 2005; Smedley, 2010). Students are able to access different materials across various modes, thereby accommodating individual learning styles (Kaur, 2013; Arkorful & Abaidoo, 2015). Lastly, blended learning enriches personalisation,

relevance and individualisation by allowing the lecturer to tailor the learning content for the unique needs of the diverse audience. Investment in blended learning is therefore supported by its effectiveness in meeting the challenges of transformative change in HE (Lai, 2011).

Despite its many advantages, there are still important shortcomings and pitfalls to blended learning. Firstly, blended learning necessitates significant technological investment, which poses a concern in resource-limited environments such as South Africa (Hofmann, 2011). Secondly, a lack of face-to-face interaction may negatively influence students' learning experience as well as their motivation and time management skills (Garrison, 2007; Vasileiou, 2009; Arkorful & Abaidoo, 2015). In addition, organisations are required to redefine the role of the lecturer in a blended learning setting, as well as to develop structures to monitor student progress (Hofmann, 2011). Moreover, poor design and lack of guidance and support may limit the efficacy of blended learning in improving student outcomes (Hughes & Lewis, 2003; Vasileiou, 2009; Graham et al., 2013). Lastly, 'at-risk' students may show poor online performance, since learning disabilities and language barriers are not adequately addressed in relatively novel blended learning models (Hughes, 2007).

There are multiple guidelines available which serve as a basis for the implementation of effective teaching strategies in a blended learning environment (Graham et al., 2013; Cotterill, 2015). These guidelines emphasise the need for well-defined institutional policies, quality assurance, innovation and financial support. In addition, they highlight the need for investment in technology and infrastructure. Professional development of lecturers, tutors and other academic staff is also important in optimising the success of blended learning efforts (Garrison & Kanuka, 2004; Carl, 2017). However, successful implementation of blended learning is associated with major challenges, including increasing workloads and the need for students and staff to familiarise themselves with these new teaching models (Stacey & Gerbic, 2008; Graham et al., 2013; Oosthuizen, 2018). In particular, additional time is required to be spent on development, updating and maintenance of learning management systems (LMS). In South Africa, this issue is further compounded by resource constraints, slow bandwidth and outdated electronic devices. In addition, there is the possibility that institutions may duplicate services trying to provide separately for students in 'traditional' classrooms and students in blended learning (Sheldon, 2018). Concerns have furthermore been raised about duplication of financial aid, admissions, advising and separate faculties.

However, opposing evidence argues against the notion that blended learning is more time- and labour-intensive (Cronje, 2018; Sheldon, 2018). For example, Sheldon (2018) argues that blended learning narrows down to the amount of preparation, irrespective of what teaching model is used. In only a few cases would the expert in blended learning course development fill both roles - a blended learning expert and an expert in the discipline.

3.4 STUDENT SATISFACTION AND BLENDED LEARNING

Student satisfaction is defined as “the favourability of a student’s subjective evaluation of the various outcomes and experiences associated with education” (Elliott & Shin, 2002:198). There is increasing realisation among HEIs of their responsibilities as a service industry, which necessitates greater emphasis on student satisfaction and needs in addition to the need for quality assurance and improvement. Indeed, student satisfaction is influenced by the quality of services provided (Richardson, Slater & Wilson, 2007; Douglas, Douglas & Barnes, 2006; Zeithaml, Bitner & Gremler, 2008; Lai, 2011) and plays a significant role in determining the effectiveness and authenticity of the teaching system being used. Importantly, student satisfaction is a major determinant of academic success, which in turn affects the reputation and financial position of HEIs. Satisfied students may attract new prospective students by engaging in positive word-of-mouth communication to inform acquaintances and friends, and they themselves may return to the university to take other courses (Helgesen & Nasset, 2007). Therefore, the satisfaction of students with their educational experience has emerged as an important desired outcome (Appleton-Knapp & Krentler, 2006).

In the literature, there are several student satisfaction dimensions or factor models that could indicate the relationship between significant predictors of overall student satisfaction in HEIs (see Figure 3.1).

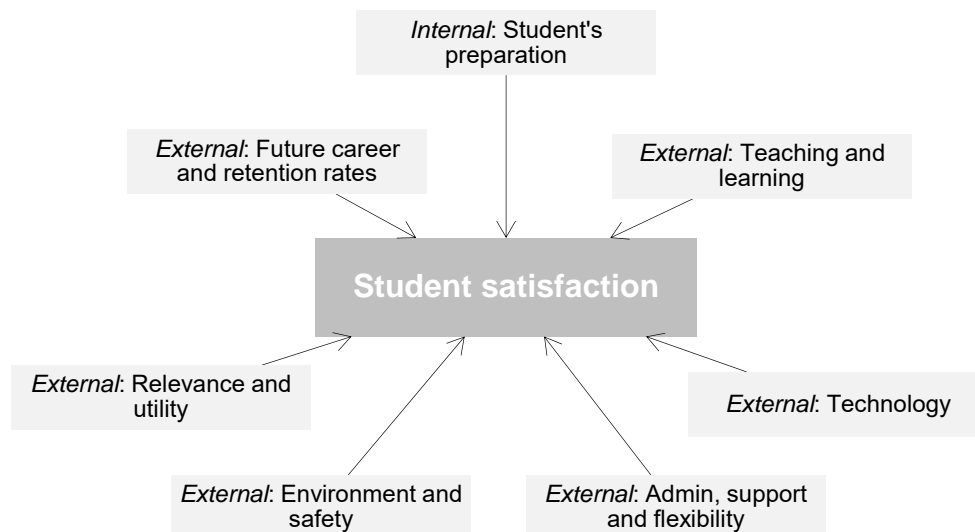


Figure 3.1: External and internal factors that have an impact on student satisfaction (Adapted from: Ngamkamollert & Ruangkanjanases, 2015)

The factors that have an impact on student satisfaction can be divided into internal (student's preparation) and external factors (teaching and learning, technology, admin and support, environment, relevance and future careers). Poon (2018) argues that factors (such as expectations, assessment and feedback, organisation and management, skills development and information) related "to teaching and learning" have the most significant importance for postgraduate student satisfaction.

It remains unclear whether student evaluations are useful in refining academic programmes (Blair & Valdez-Noel, 2014). Indeed, student feedback could add value to professional development and support behavioural improvement among academics (Blair & Valdez-Noel, 2014; Golding & Adam, 2016; Cadez, Dimovski & Zaman-Groff, 2017). In recent years, there has been a shift towards engaging students in the process of knowledge development (Bloxham & Boyd, 2007) and positioning student feedback as central to shaping the learning experience (Cook-Sather, 2006; Smith, 2008).

There are different methods of assessing student satisfaction. Firstly, formative evaluation could provide useful insight towards understanding how student feedback may support the review process as central to programme renewal (Blair & Valdez-Noel, 2014). Several factors influence student satisfaction, including 1) lecturer skills and support, 2) clear goals,

3) good lecturing practices, and 4) suitable workloads as well as 5) appropriate assessment (Ginns, Prosser & Barrie, 2007). In particular, the lecturer's ability to teach and support students is a major determinant of overall satisfaction (Richardson et al., 2007).

In addition, surveys provide the opportunity to obtain information on how to improve practices, policies and effective learning (Chen & Hoshower, 2003). However, it is important to interpret survey findings with care, and utilisation of such data may not necessarily lead to improvements in teaching and learning practices (Kember, Leung & Kwan, 2002; Zhao & Gallant, 2012; Golding & Adam, 2016). Questionnaires should also be carefully compiled to obtain meaningful information. Furthermore, there is limited awareness of academics of the potential value of assessing student satisfaction and considering the study body as a stakeholder in its own right (Blair & Valdez-Noel, 2014; Golding & Adam, 2016; Cadez et al., 2017).

A reflective approach to understanding the role of student satisfaction in programme renewal is therefore proposed to support a culture of learning at HEIs (Lea & Callaghan, 2008). In addition, reflection on student satisfaction and associated measures could allow students to self-monitor and engage more fully in the process of programme renewal.

Among the attitudinal constructs, student satisfaction - referring to student perceptions of learning experiences and perceived value of a course may be particularly worthy of investigation. Student satisfaction is related to several outcome variables such as persistence, retention, course quality and student success (Kuo, Walker, Belland & Schroder, 2013). High satisfaction leads to lower attrition rates, higher persistence in learning and higher motivation in pursuing additional courses (Allen & Seaman, 2008). Bonk and Graham (2012), Kuo et al. (2013) and Avsec, Rihtaršič, and Kocijancic (2014) emphasise that student satisfaction can be linked to student success, retention and persistence. Allen and Seaman (2008) point out that "high satisfaction leads to lower attrition rates, higher persistence in learning, and higher motivation in pursuing additional online courses".

Blended learning has many advantages, such as improving effectiveness and convenience for the individual, increasing access, flexibility and eliminating geographical barriers (Rushby & Surry, 2016). However, it is also hampered by a few stumbling blocks such as lack of peer

contact and social interaction, and by the costs involved in preparing the multimedia content material, maintenance, updating and the need for flexible tutorial support (Wu et al., 2008; Vasileiou, 2009). Student satisfaction should be an important consideration in evaluating the effectiveness of blended learning. According to Jung, Choi, Lim and Leem (2002), studies have found that students who participated in online collaborative tasks expressed higher levels of satisfaction with their learning process than students who did not participate in online collaborative learning. Indeed, student satisfaction with programme quality and efficacy is an important determinant of overall success when students are engaged in blended and online learning approaches (Jung et al., 2002; So & Brush, 2008; Solimeno, Mebane, Tomai & Francescato, 2008; Zhu 2012).

Despite the potential positive effect of online learning on student satisfaction and the growth in the utilisation of online learning in recent years, research also indicates that a big proportion of students who commence with online learning courses do not finish them (Dutton, Dutton & Perry, 2002). This suggests that something is lacking in online learning environments. By considering the feedback of students who participated in online learning courses, it is possible to better understand the reasons why students are often dissatisfied with their online learning experience. HEIs consider student satisfaction as one of the major elements in determining the quality of online programmes in today's markets (Yukselturk & Yildirim, 2008; Cadez et al., 2017). Online learner perspectives and satisfaction provide valuable information for institutions to gain a better understanding of their weaknesses, strengths and challenges in the provision of online programmes (Noel-Levitz, 2001). Continuous evaluation is an important aspect of online learning, especially in distance education where most of the course delivery is conducted online. Data of evaluation studies on student satisfaction can help course designers, educators and administrators to identify areas where improvement is needed (Reinhart & Schneider, 2001).

It is important to integrate ICT and face-to-face learning approaches via a shared appreciation of desirable outcomes and study goals (Graham et al., 2013). Stakeholder collaboration and participation is critical in integrating these approaches (Bath & Bourke, 2010). Towards this goal, faculties should promote active student and lecturer participation and engagement (Vasileiou, 2009; Carl, 2017). All stakeholders should have a clear understanding of the expectations for management and administration of blended learning programmes. Also,

quality assurance and improvement are emphasised as important aspects of integration (Diaz & Brown, 2010). Ongoing evaluation of action plans and emphasis on research is also important in assuring the effective impact of blended learning programmes (Garrison & Vaughan, 2008)

Stacey and Gerbic (2008) suggest the establishment of a 'blended learning community of practice' to provide continuous pedagogical and technical support. Such measures could improve student access to technical and academic support with the goal of promoting engagement within a blended learning environment (Mason & Rennie, 2006; Lane, Carl & Strydom, 2015)

The success of blended learning programmes depends on many factors. Firstly, there should be clarity on the rationale for implementing blended learning. Secondly, the expectations of students and the role of the staff in the context of programme renewal should be clear (Carl, 2017). Emphasis should be placed on renewal and an ongoing process of transformation (Sharpe, Benfield, Roberts & Francis, 2006; Stacey & Gerbic, 2008).

To conclude, HEIs started to value the use of student evaluation studies to highlight the strengths and possible areas of improvement and refinement in the programme. Students are seen as the client, therefore HEIs started to take advantage of the students' voice to improve, but also to put emphasis on further professional development. Literature states that student evaluation studies can add value to support academics' professional improvement and can improve and change lecturers' practices within a blended environment. On the contrary, the opposite might also be true: students' feedback can improve teaching, but one factor will make the difference - and that is the lecturer's approach towards the evaluation results.

3.5 NATIONAL POLICY PERSPECTIVES ON THE ROLE OF ICT IN HIGHER EDUCATION

Stellenbosch University's vision is to “promote reflection, self-insight and quality enhancement as thought leaders in the higher education community”, and part of SU's mission is to “assure quality and provide the tools and support to staff and students to enhance their own learning and success” (Stellenbosch University, 2018a). Institutional vision in HE settings must align with existing national policies. Over the past twenty years national discussions, particularly in the DHET milieu, have led to several recommendations in Education White Paper 3 – A Programme for Higher Education Transformation (RSA DHET, 1997) - to engage in innovative changes which seek to promote quality education through the collaboration of institutions in developing high-quality course materials and the role of ICT in South Africa (Johl, Flowerday & Von Solms, 2013). The White Paper (RSA DHET, 2013) aims to develop and expand effective ICT access by facilitating shared establishments (support centres), bidding for funds to ensure ICT infrastructures, collaborating with the Department of Communication to reduce costs, facilitating increased bandwidth and developing an ICT plan for equitable access, especially in more remote areas. The use of ICT in HE can assist in addressing the needs of students who live far away from physical campuses, but who need access to quality, affordable HE (Lai, 2011). In addition, the White Paper on e-Education (RSA DoE, 2004), the Policy on Distance Education (RSA DHET, 2012a), the White Paper for Post-School Education and Training (RSA DHET, 2013a) and the draft White Paper on Science, Technology and Innovation (RSA, 2018) provide guidelines and regulations which inform strategies for implementation of blended learning based on specific requirements and standard setting.

Firstly, the White Paper on e-Education (RSA DoE, 2004) published a new e-Education Strategy 2013-2025 to assist with the implementation of e-Education in South Africa and provided a planning map towards reaching the goals outlined by the Action Plan of 2014 (RSA DHET, 2012b). The intended outcome of this strategy is to integrate ICT across all HE levels to improve quality. The strategy is guided by agencies including the DHET to ensure connectivity in all institutions and a compulsory training component (Meyer & Gent, 2016). However, this new strategy faces numerous challenges, viz. unreliable connectivity, lack of leadership, lack of ICT skills of lecturers, limited access, uncoordinated implementation, e-maturity and e-readiness (RSA DoE, 2004; Meyer and Gent, 2016). The White Paper on e-

Education (RSA DoE, 2004:16) supports the development of ICTs “to create access to learning opportunities, redress inequalities, improve the quality of learning and teaching, and deliver lifelong learning. ICTs can accommodate differences in learning styles and remove barriers to learning by providing expanded opportunities and individualised learning experiences”. DHET policies reiterated what was said about the need for a national view and institutional development, as well as quality course material and greater accessibility.

Secondly, the Policy on Distance Education (RSA DHET, 2012a) of the Minister of Higher Education and Training (MHET) was developed to support optimal implementation of learning technologies to the advantage of all stakeholders. The policy places emphasis on expansion, technological opportunities, funding arrangements, quality assurance and cross-border distance learning education.

Thirdly, the White Paper for Post-School Education and Training (RSA DHET, 2013a) aims to create an effective and integrated post-school system, with the ultimate goal of contributing to an equitable and fair learning environment. This policy seeks to promote sustainable cooperative relationships, provide guidance, ensure policy alignment, expand access and increase diversity within an affordable tertiary education system. Furthermore, the policy highlights the need for ongoing professional development with fair access to digital technologies to promote learning opportunities in the post-school sector (RSA DHET, 2013a). The DHET emphasises that the success of renewal programmes will be shaped by the programme’s pedagogical strength, which is predicated upon adequate human and financial support. Finally, the DHET aims to develop ICT access by stipulating a strategic integrated ICT plan that aligns with the national e-Skills Plan (Department of Communication), focusing on building partnerships with the Department of Communication and other governmental stakeholders to come up with a plan to reduce the bandwidth costs for educational purposes, especially for students in remote areas, to negotiate easier access to end-user mobile devices and to seek funds for inclusive ICT infrastructure at HEIs.

In this setting, the draft White Paper on Science, Technology and Innovation (RSA, 2018) was motivated by the Fourth Industrial Revolution (Schwab, 2017) of automation and digitised transformation to promote ongoing learning, interaction and collaboration in tertiary education. In particular, inclusivity and interactivity are addressed in this policy. The newly

drafted policy has several overarching goals, including to make sure South Africans benefit from and respond to exciting opportunities, since traditional jobs are replaced by automation and online “just-in-time personalised services” (RSA, 2018:4). Therefore, the White Paper supports policy coherence within the national innovation system to improve skills development, strengthening of partnerships and research by direct funding to ensure greater access to solutions developed by universities. One of the key ingredients to the success of South Africa’s reaction to the Fourth Industrial Revolution is how the stakeholders will make use of the essential role of ICT. In particular, this policy realises the importance of human resource development in HE, especially in changing the demographics of academic staff as well as transforming curricular and research plans (Carl, 2017; RSA, 2018). The policy acknowledges the gap in students’ financial and public support especially with increased postgraduate enrolments due to gradual implementation of free undergraduate HE.

The true test of the above policies would be whether the policies would support the National Development Plan (RSA DHET, 2001; RSA, 2011) to help change the South African reality for the better by 2030. Furthermore, there is the need for postgraduate support programmes to support students through their research journey - being it bursary programmes or innovation-related skills such as gaining intellectual property management guidance. Nevertheless, continuous training and development of all human resources are essential for a sustainable research journey.

3.6 INSTITUTIONAL PERSPECTIVES ON THE ROLE OF ICT FOR TEACHING AND LEARNING

The SU’s Division for Learning and Teaching Enhancement is a unit that offers additional support, in collaboration with SU faculties, in enriching the learning and teaching experiences of staff and students. The ultimate goal is to develop and promote best practices and scholarship of teaching and learning and the utilising of learning technologies. Furthermore, there is a need to inspire and form partnerships to encourage and support innovative learning and teaching. The division consists of three centres, viz. the Centre for Teaching and Learning, the Language Centre and the Centre for Learning Technologies. The three centres work in close partnership to offer academic staff development relating to new approaches. Four key motivators of HEIs’ consideration to integrate new technologies into

their curriculum renewal process are: to accommodate growing student numbers, to enhance the learning and teaching experience, to develop student skills and to design more efficient courses by improving processes and functions (Lane et al., 2015). These are also some of the reasons why SU decided to invest more resources in a blended learning approach to complement traditional face-to-face interaction.

SU has been one of the leading SA HEIs in the utilisation of technology for teaching and learning. At the beginning of this century the institution launched an innovative e-campus initiative. The aim of the e-campus initiative was to improve the delivery model and to create a more cost-effective teaching platform, called SUNLearn. Stellenbosch University (n.d.) describes SUNLearn as "an open source, powerful, flexible and mobile-ready blended learning platform for learning and teaching", that offers programmes and courses to a population spread across a wider geographical area by means of multimedia modules, co-operative learning instruments such as blogs, integration with social network technologies like YouTube, podcasts, mobile learning strategies and even offline availability of content. The e-campus initiative was followed by SU's ICT strategy (Stellenbosch University, 2013:4) and vision that aims to "transform education from the traditional methodologies and approaches to a more contemporary, open, responsive and flexible learning system".

The SU Institutional Intent and Strategy highlights that - in agreement with its values, vision and mission - the institution needs to become more flexible and innovative to extend its educational boundaries by using advanced learning technologies (Stellenbosch University, 2013-2018).

The aim of SU is to become a two-mode medium-sized university by 2020, which means retaining and enhancing the traditional contact mode of delivery, but also expanding its offerings to the 'learn and earn' market through blended approaches (Stellenbosch University, 2013-2018). This new market will require a shift in focus from abstract learning to more applied learning, as well as the collaborative construction of new knowledge through the blending of information and communication technologies which will make learning more affordable, effective and sustainable (Cotterill, 2015). SU has identified three overarching strategic priorities: firstly, to broaden access (increasing access to new knowledge markets and the diversity of the student and academic profile); secondly to sustain momentum on excellence (as leading research institution and to be able to maintain high success rates), and

lastly to enhance societal impact by establishing commitment and developing visionary leadership.

The SU aligned all the strategies (Institutional Intent and Strategy 2013-2018, Vision 2030, Strategic Framework 2019-2024, Vision 2040), each carefully chosen as the core “coordinates” on the map, guiding the institution through the current context and challenges and to prepare and be well-equipped for the unknown future so that the next SU generation could benefit. SU published the recent six core themes to ensure a systematic, sustainable and transformed institution for the next generation, viz. (1) transformative student experience, (2) networked and collaborative teaching and learning, (3) research for impact, (4) purposeful partnership and inclusive networks, (5) employer of choice and (6) a thriving SU (Vision 2014 and Strategic Framework 2019-2024). The Vision 2040 and Strategic Framework 2019-2024 strategies highlighted the Council on Higher Education’s (2016) three international trends, Bokor’s (2012) five trends based on the Australian university model and De Villiers’s (2017) eleven trends that will influence the HE environment. For this study, ICT, digital technologies (Ernest and Young, 2012) and Fourth Industrial Revolution and technologies (De Villiers, 2017) trends will have a direct influence on the academic development and programme renewal (Carl, 2017). Weis, Benmayor, O’Leary and Eynon (2002:153) labelled the digital technologies and multimedia trends as “they are transforming our classrooms from spaces of delivery to spaces of active inquiry and authorship”.

A number of challenges with regard to the adoption of a blended learning approach across the institution are evident (Graham et al., 2013). Firstly, the digital literacy levels of both students and lecturers may be too low; secondly, as part of the admission process, SU needs to clearly stipulate the minimum requirements for students to have the adequate internet access and the necessary data usage to be able to participate in online class activities and to submit assignments; thirdly, introducing academics to and supporting them with regard to blended pedagogies and how to select the most effective ICT instrument in their modules for sustainability (Mason & Rennie, 2006; Vasileiou, 2009; Lai, 2011; Lane et al., 2015); and lastly, to encourage academics to critically engage, evaluate and reflect on the blended process through training and supportive workshops in communities of practice. These were some of the challenges also experienced in the FOE.

3.7 FACULTY RATIONALE FOR THE ADOPTION OF A BLENDED LEARNING APPROACH FOR NEW BEd HONS PROGRAMMES

As mentioned above, there were institutional imperatives for the FOE to consider adopting a blended learning approach for its Honours programmes, but this decision was also aligned with the strategic vision of the Faculty in terms of programme renewal. In the FOE, the conceptualisation of the blended learning BEd Hons programmes commenced in 2013, initiating staff development on blended learning for curriculum development in 2014, with the new programmes accredited in 2015 (BEd Hons programme committee, 2015a; Faculty of Education, 2017). The FOE took a decision in 2013 to invest in blended learning in the redesign of the new programmes for a number of reasons, including (1) to rationalise staff time, as lecturers were teaching the very same programme in two modes, namely telematics and face-to-face; (2) exploitation of new markets, by providing for working educational practitioners' needs for further study with greater flexibility; (3) creating an innovative learning environment to stimulate and enhance student engagement and improve learning outcomes (Stellenbosch University, 2017). Blended learning is operationalised in the new programmes by means of a combination of two weeks of compulsory face-to-face contact sessions held on campus during the school holidays (April and June-July); a two-hour telematic broadcast every Friday, and electronic learning using SUNLearn - the web-based learning platform. Programmes included in the present study were re-curriculated with a view to improving teaching productivity, to be more affordable, to accommodate larger numbers of students, to improve learning and to provide effective learning opportunities to educational practitioners.

The new blended learning approach brings with it certain strengths and challenges to the renewal of BEd Hons programmes. For example, some of the strengths are that students can come to class for contact sessions twice a year and combine those with completing their degree through online activities, discussion forums and submitting assignments on LMS. The face-to-face contact sessions are important, but in addition there is also the opportunity to continue interaction through online engagement, allowing for students from a much broader range of geographical space to participate than with a purely residential programme. This blended approach also gives students the opportunity to study while working as teachers; hence, it does not prohibit them from earning an income. Another strength is the fair amount

of flexibility (Lai, 2011). Students can literally study anywhere and anytime, as long as they attend the contact sessions and meet the due dates for assignment submission.

Challenges include pedagogic challenges, for example when the lecturer designed the blended module to practise responsive pedagogies during the implementation phase by allowing both parties (lecturer and students) to be able to respond, participate and collaborate effectively with the necessary resources during an online activity (Lai, 2011). Challenges stem not only from the lecturer's perspective to prepare, connect and engage, but also from the fact that the postgraduates have certain expectations and assumptions about the new programmes (Carl, 2017). The new blend can be a 'learning culture shock', especially for those postgraduates who have been teachers for a few years. Many SA school teachers are used to teacher-centred learning. These programmes require students to work independently, formulate opinions on and question the viewpoints in academic research and publications, and to conduct a small-scale research project. Further challenges are those of meaningful engagement, timely feedback, research supervision and the kinds of resources that the lecturer will need. In view of these challenges, measuring student satisfaction is important - as it can help identify factors that may need improvement in order to achieve enhanced student learning in the new blended learning programmes.

3.8 CONCLUSION

In summary, blended learning promises to cross boundaries to the work-and-earn market, and to address the need for lifelong, ‘anywhere anytime’ flexible learning opportunities to accommodate the current and future student cohorts. In particular, the national policies increasingly regard ICT as a critical ingredient in the transformation of HE, to be able to compete and participate meaningfully in a globalised world. Realisation of effective blended learning practices requires them to be tailored for each programme, not a ‘one-size-fits-all’ approach. Furthermore, it is important to highlight that ICT is relevant within HE as a means of supporting the process of teaching and learning, and not as a focus in itself. To use ICT as an enabler of the learning processes requires that the role of the lecturer and pedagogy remains centre stage.

Challenges that need to be addressed include resource-limited environments, lack of interaction and guidance, poor time management skills of students and ‘at-risk’ students, who might struggle with low levels of digital literacy. In conclusion, although there are multiple guidelines available which serve as a basis for the implementation of an effective blended learning approach, the emphasis should be on a well-defined institutional policy, quality assurance, innovation and financial support.

CHAPTER 4

RESEARCH METHODOLOGY

4.1 INTRODUCTION

This chapter provides an overview of the research paradigm, the research approach and research methodology applied within the study. The study adopted an applied, mixed-method approach, and programme evaluation was utilised to evaluate the implementation phase of the three new blended learning programmes.

4.2 RESEARCH PARADIGM, APPROACH AND METHODOLOGY

Research paradigms provide frameworks according to which research is conducted, including ontology (how the world is understood), epistemology (how knowledge is acquired) and axiology (research values) (Neumann, 2001; Creswell, 2009). The manner of thinking dictated by a selected paradigm helps inform the overall approach to research conduct, which in turn assists in the selection of appropriate study methodology. There should be coherence between the research paradigm, the research approach and the research design in the research project as a systematic pursuit of knowledge, as illustrated in Figure 4.1.

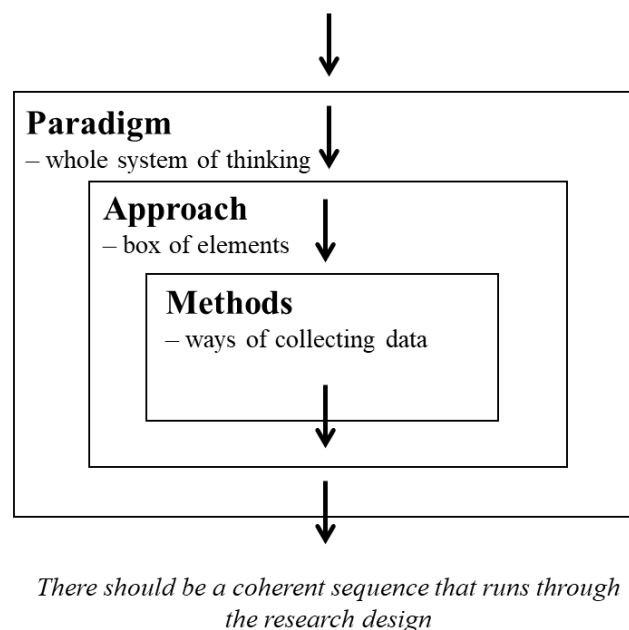


Figure 4.1: A model of disciplined inquiry (Adapted from: Nogeste, 2007)

Babbie and Mouton (2001) define paradigm as how the researcher thinks and sees the world, how he/she sees knowledge, what values are being applied and what methodology he/she is going to follow. A paradigm can be described as a way of understanding and of how one thinks about the world. The outlook on the world is specific to each researcher; each researcher has his/her own paradigm, and these paradigms have a profound effect on the way in which the research project is conducted.

In the present study, a pragmatist paradigm was adopted, whereby the primary goal was not to prove a particular hypothesis, but to solve a real-world problem. The utilisation of the pragmatist paradigm informed my selection of a mixed method research approach, combining both qualitative and quantitative data to arrive at a composite viewpoint on my research problem (Creswell, 2009). This study can also be regarded as applied research as a tool for exploring real-world problems in relation to potential solutions (Fouché, 2011).

Plowright (2011) explains that, in the pragmatist methodology, the research question is central. Whereas the research question lies within a certain context, it directs the choices the researcher will make with regard to cases, methods and data collection and analysis. Plowright (2011) proposes the following framework which will guide and enable the research project to eventually answer the research question (see Figure 4.2).

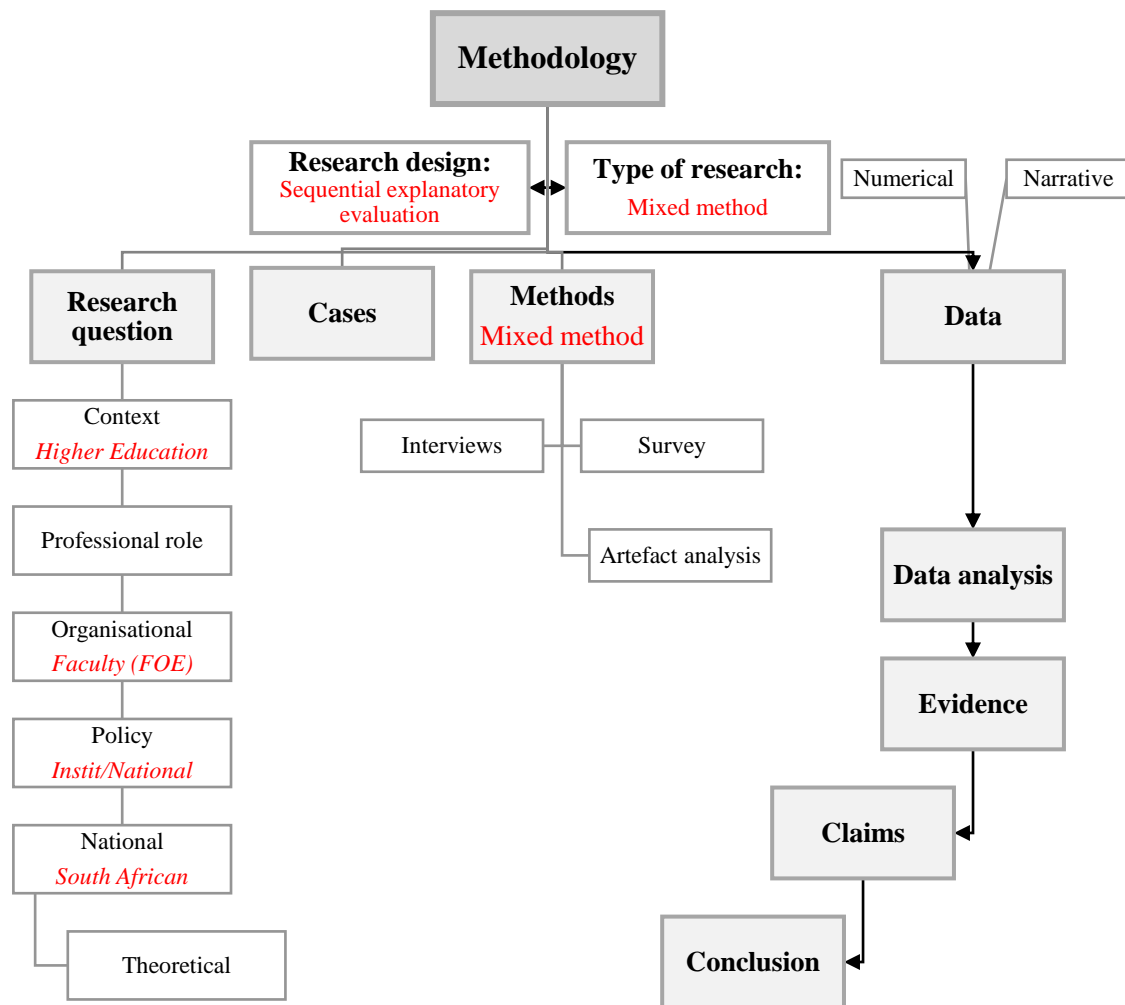


Figure 4.2: An extended framework for an integrated methodology (Adapted from: Plowright, 2011:9)

Although Plowright's (2011) extended framework may give the impression of a linear process, the research process is rather of an iterative nature in which the researcher will continuously have to move back and forth and possibly make amendments before continuing the process. For this study, the research question lay within the context of advanced professional and academic training, governed by national higher education and teacher training policies. In addition, the institutional and faculty contexts had to be taken into account. Thereafter, the researcher identified the cases to be investigated which, in this study, included three new BEd Hons programmes. Data was collected by means of a student survey and interviews with staff, as well as by an artefact analysis which included faculty documents and institutional policies. Next, the numerical and narrative data was analysed, which led to the evidence, the claims that were made and lastly to the conclusion of the study.

The numerical data was analysed first, followed by the analysis of narrative data (Tashakkori & Teddlie, 2003; Creswell, 2009). As a mixed method research study, it combined elements of quantitative and qualitative approaches (see Table 4.1), the use of composite viewpoints and the integration of data in a single study (Creswell, 2009). Mixed method research, using both quantitative and qualitative data, is valuable because it gives the researcher different kinds of insights into a particular situation by using the combined strengths of the two kinds of data and the two kinds of analyses (Creswell, Clark, Gutmann & Hanson, 2003). The rationale of mixed methods would be to understand a situation, which has both quantitative and qualitative dimensions, in an integrated way (Creswell & Clark, 2017). A mixed method approach is useful for obtaining a variety of perspectives, gaining a more comprehensive view of research problems and combining methods to get a deeper understanding of a particular situation.

Table 4.1: The relations between the different kinds of methods and data relating to the research question

| Aim | Objectives | Research method | Kind of data |
|--|---|--|--|
| To investigate student satisfaction with the blended learning approach in the implementation of the BEd Hons programmes. | To determine how satisfied students were with the blended learning approach in the implementation of the BEd Hons programmes. | <input type="checkbox"/> Quantitative | <input type="checkbox"/> Questionnaire (online) |
| | To evaluate facilitators' perceptions with regard to the benefit gained through the blended learning approach by the students in the implementation of the BEd Hons programmes. | <input type="checkbox"/> Qualitative | <input type="checkbox"/> Narrative data from individual interviews, semi-structured, in-depth |
| | To identify factors considered to contribute to or detract from students' satisfaction with the programmes. | <input type="checkbox"/> Qualitative | <input type="checkbox"/> Narrative data from survey (open-ended items) and from individual interviews, semi-structured, in-depth |

4.3 RESEARCH DESIGN

In the context of a mixed method approach, a sequential explanatory evaluation study design was selected to evaluate the implementation phase of three new blended learning programmes at the SU FOE over a one-year period (2017-2018).

Evaluation is an ongoing process which includes assessments of policies, activities and strategies relevant to a particular programme (Deluca et al., 2009). In an evaluation study, information is collected to inform future decision making across the stages of programme design, implementation and improvement (Patton, 1997). In spite of the popularity and utility of evaluation studies as a research design, this evaluation study was accompanied by important challenges, since the researcher needed to balance the priority and weight of the two types of data (quantitative and qualitative) for collection and interpretation (Creswell & Clark, 2017). The evaluation should fit the programme and the stage of development. In addition, researchers need to ask who the potential users (lecturers, administrator, fund providers, programme coordinators, etc.) of the programme evaluation are, in addition to identifying supporters and sceptics (see Table 4.2).

Table 4.2: The potential users of the study (Adapted from: University of Wisconsin, 2003)

| Who <i>might use the evaluation?</i> | What <i>do they want to know?</i> | How <i>will they use the results?</i> |
|--|--|--|
| Programme coordinators | To what extent is the programme realising its identified outcomes? To what extent is the programme team collaborating to the benefit of students? | To change the strategy if it is not working. |
| Honours students | How are the students benefiting? | To decide about continued participation or telling others about the program. |
| Programme committee | Do the programmes satisfy the quality criteria of the faculty and the institution? Is the programme worth the cost, investment and resources? | To decide about improvements. To inform policy. |
| Lecturers | Are the students achieving the specified outcomes? What are the lecturers getting out of this? | To decide what changes need to be effected in specific modules. |

Utilisation-focused evaluation (U-FE) is a specific, situational, user-oriented approach that focusses on the functionality and effectiveness of a particular programme, with emphasis on systematic collection and interpretation of evaluation results. Fundamental principles of

utilisation-focused evaluation include commitment, strategising, focused evaluation and high-quality participation (Patton, 2002). The main focus of utilisation-focused evaluation is on the intended use and purpose of the evaluation, to ultimately inform discussion and decision-making regarding renewal of policies and practices. In addition, the researcher takes on the role of facilitator and advisor in a utilisation-focused evaluation study. Importantly, utilisation-focused evaluation provides principles and processes to guide the researcher towards improving the effectiveness of programmes (Patton, 2002). Patton's (2012) 17-step checklist is an effective decision-making outline that helps select the most appropriate content, model and methods used in a utilisation-focused evaluation study.

Lastly, a sequential explanatory design (see Figure 4.3) allowed the researcher to delve deeper by collecting data, using a survey first and conducting follow-up qualitative interviews thereafter (Creswell et al., 2003). Thus, the researcher was able to get a view of the breadth and depth of the problem and consequently to develop a deeper understanding of the problem. In this case, the researcher generated the 'numbers' and then the 'words' were collected to explain the numbers. Sequential explanatory design is one of forty mixed-method research designs described in the literature and one of the top six most popular and most used research designs (Tashakkori & Teddlie, 2003; Creswell, 2009). The sequential explanatory design is illustrated in Figure 4.3.

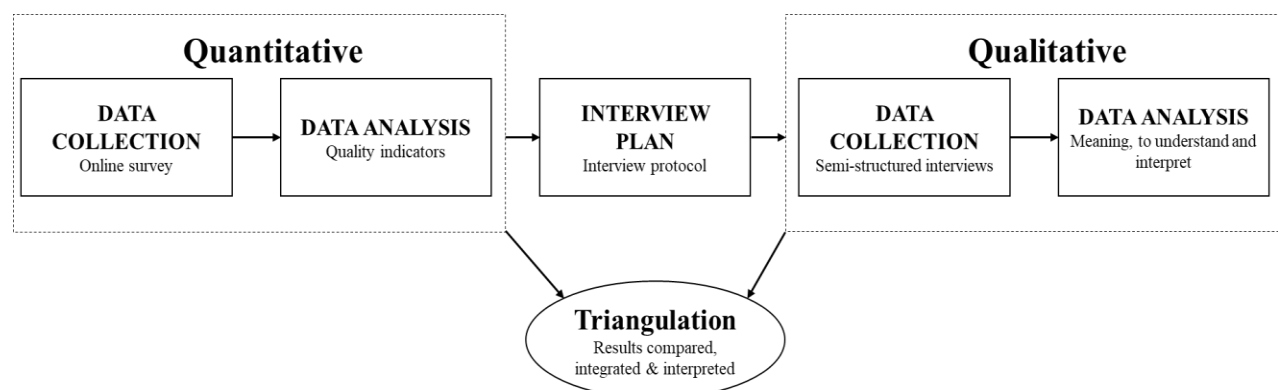


Figure 4.3: Sequential explanatory design (Adapted from: Creswell et al., 2003; Wu, 2011)

Sequential explanatory designs are popular in social science research (Creswell, 2009). Regardless of this design's attractiveness and straightforwardness, it is not necessarily easy to implement because the researcher has to find the perfect balance between the priority and weight of the quantitative and qualitative data collection and analysis (Creswell & Clark,

2017). In addition, issues might arise during the various stages of the research process and also during the integration of the results (Creswell et al., 2003).

4.4 SELECTION OF STUDY PARTICIPANTS

The researcher chose to do a census-type of study instead of a sample-type of study. A census-type study was appropriate, seeing that the population size was relatively small and that there were only small variances in the characteristics of the population. Three target populations of respondents were identified to be included in the study, namely: 1) the postgraduate students registered for BEd Hons programmes in 2017; 2) lecturing staff, and 3) administrators (professional, tutor or administrative staff members). A nonprobability technique was used for convenient sampling. Potential participants included enrolled (N=109) students, three programme coordinators (including one acting coordinator for 2017), eleven lecturers (including the convenor of the compulsory module), a tutor and three professional and administrative staff members. The participants were either full-time students or part-time employed education specialists. The total population was made up of all enrolled Honours students, i.e. nine registered students in Language Education, 70 students in Educational Support and 30 students in Educational Development and Democracy. The rationale of targeting the BEd Hons students after their first year was that they had, by then, formed perceptions of the blended learning process, experimented with blended learning and would thus be able to express their satisfaction (or dissatisfaction) with the blended learning implementation process. In addition, the researcher used purposeful sampling, a technique commonly used in qualitative research, to select specialists (lecturers, professionals, tutors and administrative support staff members) in the field to share information-rich perspectives (Patton, 2002).

4.5 DATA COLLECTION

A combination of quantitative and qualitative research techniques was utilised for different forms of data collection, as shown in Figure 4.4. A web-based, self-designed, self-administered instrument and Checkbox software were used for the electronic survey known as SUNSurvey (Student Satisfaction Questionnaire, see Addendum A) that was conducted. From the total number of 109 registered students, 36 students participated in the survey, for a response rate of 33%. The questionnaire measured student satisfaction with learning material,

support, interaction, programme content, interface, assessment, application and feedback. In addition to this, semi-structured interviews with three programme coordinators (including one acting coordinator for 2017), eleven lecturers, a tutor and three professional and administrative staff members were conducted to elicit their perspectives on the programmes, particularly related to student satisfaction.

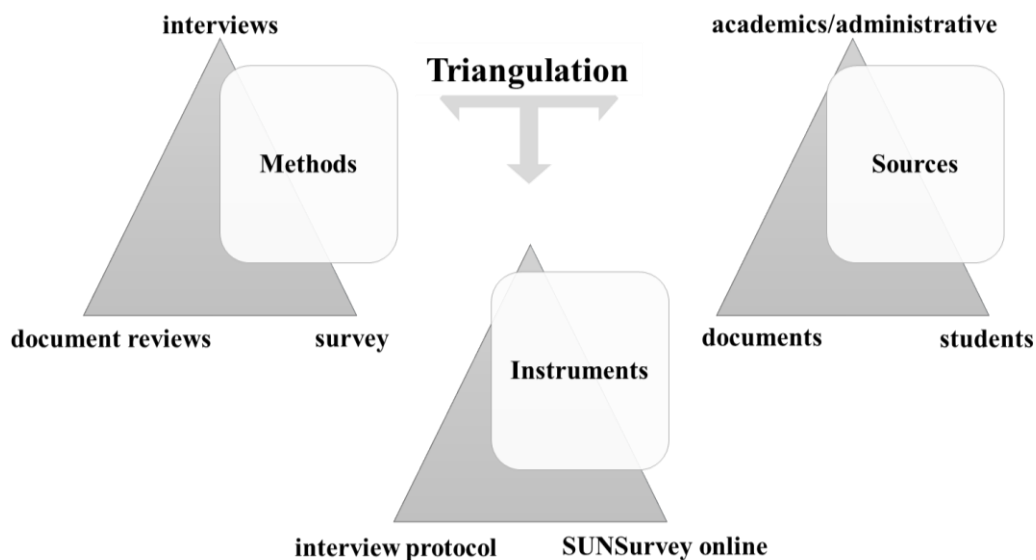


Figure 4.4: The data collection plan (Adapted from: Latham, 2007)

Quantitative primary data (low control) was collected systematically through an online survey (Mertens, 2010).

4.5.1 Questionnaire

Johnson and Christensen (2014:675) define survey research as “a nonexperimental research method based on questionnaires”, gathering information from a specific group of people for the purpose of generalising the results to a larger population. For the purpose of this study, a cross-sectional type of survey research was used in the first phase of data collection by taking a ‘snapshot’ of the population at a particular point in time (Babbie & Mouton, 2001). Although the survey could not measure change, this was not the intention of this study, as it only focused on the programme implementation phase.

The advantages of survey methods include: they can accommodate large sample sizes on a once-off basis (i.e. they are economical and efficient); the results can be generalised to a target population; they produce precise enough estimates to identify small differences; they are easy to administer; they record answers to structured questions, and they facilitate advanced statistically analyses (Babbie & Mouton, 2001). Although it is easier to conduct and administer a questionnaire than to conduct face-to-face interviews with people, the downside is that it is hard to design a good quality survey instrument that is reliable, valid and that gives consistent results. Common problems in questionnaire design are the length of the instrument, unclear questions, pointless questions and leading questions that are not aligned with the research questions or aims (Cohen, Manion & Morrison, 2007).

Neuman (1997:251) lists some advantages and disadvantages of self-administered questionnaires; advantages being that the respondents can complete the questionnaire in their own time, they are cheaper via free online surveys (e.g. SUNSurvey) and the degree of anonymity is increased.

The first phase of data collection was done through an electronic self-administered questionnaire (see Addendum A) on the SUNSurvey platform for a period of four weeks, starting on 24 April up to 22 May 2018, which included two reminders two weeks apart (7 May, 14 May 2018). A standardised data capturing sheet was prepared and coding determined for all questionnaire items. If a response was not provided, that cell was left blank. The last three questions were open-ended questions, and that data was analysed as qualitative data.

The researcher distributed 109 online questionnaires to the students (see Figure 4.5). Due to the conventional expectation of low response rates in survey studies, two reminders were sent out after the first two weeks. Thirty-six questionnaires were returned, of which 32 were valid completed responses for the statistical analysis, thus a 29% response rate.

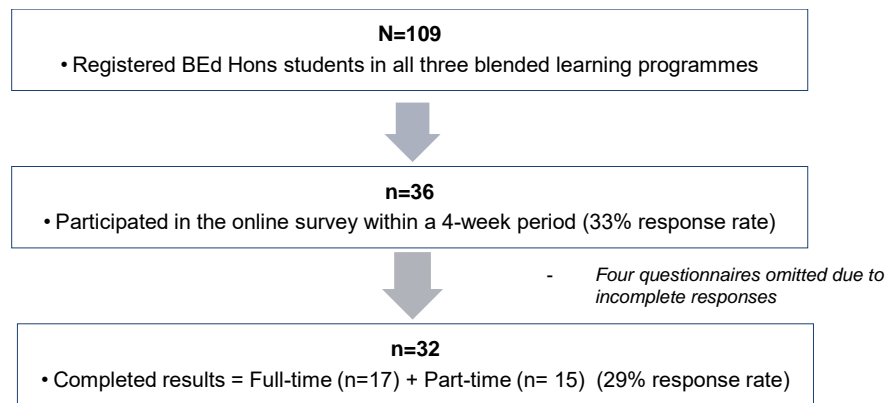


Figure 4.5: Overall survey response rate

The final response rate was 29%, which is an acceptable response rate for such a type of survey. A fairly small population was targeted. Figure 4.6 illustrates how many students registered for each of the three programmes, compared to how many respondents participated and completed the survey.

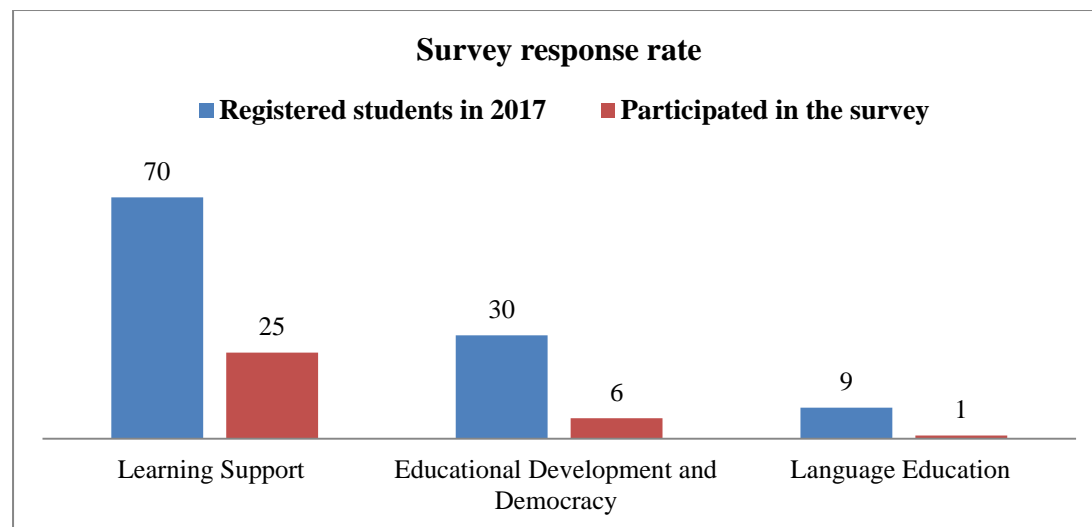


Figure 4.6: Survey response rate per programme

Students in the Learning Support programme had the highest response rate (almost 36%), which was fortunate - as this was the biggest programme with the largest student intake.

The survey instrument was adapted from the studies of Sun et al. (2008), Palmer and Holt (2009) and Wang (2003). The questionnaire consisted of three sections, namely two programme demographical questions, 48 statements and three open-ended questions. Institutional permission to undertake the study was granted by the Division for Institutional

Research and Planning on 1 December 2017 (Addendum E) and ethical clearance for the study was granted by the Stellenbosch University Research Ethics Committee (Humaniora) on 26 March 2018 (Addendum F). The participants were assured of the confidentiality of all the information given and that none of the data gathered would be used to disadvantage anyone or the institution (see Addendum B). The 48 statements were measured using a 4-point Likert scale ranging from 1 = strongly disagree to 4 = strongly agree (see Addendum A). The questionnaire aimed at measuring the influence of each of the independent variables on the dependent variable, which is student satisfaction. The ten categories consisted of 48 statements. The questionnaire items were grouped according to demographics, programme and module material, support, interaction, programme content, interface, assessment, interaction, application, face-to-face versus telematics, feedback and satisfaction. A more detailed discussion of the survey items is given in Chapter Five.

4.5.2 Interviews

McNamara (1999) highlights the usefulness of interviews in getting the story behind the participant's experience so that the interviewer can pursue in-depth information around the topic. It can also be useful as a follow-up to other forms of data collection. In personal interviews it is important that the researcher is knowledgeable about the topic, that there is a good interview structure (protocol), that clear and short questions are posed distinctly and understandably, and that the interviewer would competently steer the interview and would be critical to judge the reliability and validity of what the interviewee conveys. Disadvantages of interviews are the costs and time involved, the lack of anonymity and how the personal style of the interviewer, i.e. how questions are asked, may influence the respondent's answers.

As pointed out above, an important advantage of mixed method research is that a second round of data collection can build on data that had been collected for a previous phase of the research. This means that when collecting qualitative data after the quantitative data had been collected, the researcher can get much richer, deeper insights than s/he had from only the quantitative data (Creswell & Clark, 2017). For example, the students' quantitative feedback showed that they experienced two major challenges. These could then be followed up in the interviews with probing questions such as: 'Was this a problem?', 'What were the challenges?' or 'How can these challenges be overcome?'

The second phase of data collection consisted of scheduled, individual 30-40-minute semi-structured interviews with three programme coordinators, eleven of the 19 BEd Hons lecturers, one tutor and the three professional or administrative staff members. The interviews were conducted from 4-11 June 2018 at the FOE. The stakeholders received their interview invitation which included a proposed interview schedule, timeline, interview protocol (see Addendum C) and consent form (see Addendum D) three weeks before the interviews took place. The reason for sharing the interview questions in advance was to allow the participants some time to reflect on the questions beforehand. The researcher decided on the semi-structured interview format in order that all interviewees received the same questions, with the intention to ensure that the same general areas of information were covered. This provided more focus than the conversational approach, but still allowed the interviewer a degree of freedom and adaptability in getting the information from the interviewees. This approach also facilitated shorter interviews that can be more easily analysed and compared. Further advantages of this interview method are that it provides the opportunity for direct feedback and for the interviewees to give clarifications, while also allowing the interviewer to probe complex answers by asking the interviewee to explain if the response was unclear. This was also judged to be the best way to get interviewees to cooperate without overtaxing their patience, thus allowing the participants who are the specialists in the field to share their rich, in-depth knowledge and experience. The researcher audio-recorded the interviews, after which they were transcribed. The dual purpose of the recordings was to serve as backup and to capture the detailed responses of the interviewees.

4.6 DATA ANALYSIS AND INTERPRETATION

The purpose of data analysis is to make meaning, to understand and interpret the collected data; thus the researcher brings him/herself into the conversation. Statistical analysis (descriptive statistics and inferential statistics) of the quantitative data and thematic analysis of the qualitative data (interviews) were used to interpret the collected data.

4.6.1 Quantitative analysis

Only two nominal responses were recorded, namely the kind of programme and the duration of the programme, and these were represented as text. The mode for ordinal responses on the items was a 4-point Likert scale, (4 for *strongly agree*, 3 for *agree*, 2 for *disagree* and 1 for *strongly disagree*) which enabled the calculation of means and further inferential statistical

analysis of the constructs. Correlations were done with Pearson or Spearman correlations (for non-normal responses) to determine statistically significant ($p < 0.05$) correlations between ordinal and continuous variables. Analysis of variance (ANOVA) was used to determine if the means of the continuous data differed between the nominal variables. If the data was normally distributed, the ANOVA F-test (or T-test for two groups) was used to determine significant differences. If the data was not normally distributed, the non-parametric Mann-Whitney U- test for two groups and the Kruskal-Wallis test for more than two groups was used to determine the p-value. When more than two levels of the nominal variable were involved, the Bonferroni multiple comparison procedures were used to determine the nature of the differences between the variables.

4.6.2 Qualitative data analysis

Thematic analysis was utilised due to its value as a “systematic and sophisticated” (Howitt & Cramer, 2008:341) approach to analyse qualitative data. This entails a process of identifying, organising and presenting patterns and common themes across transcribed and coded data. Thematic analysis may be either inductive (experiential and essentialist) or deductive (critical and constructionist), the selection of which is driven by the type of data collected (Braun & Clarke, 2013).

In this study, a combination of the two approaches was used to code and analyse data obtained from interviews with lecturers and administrative staff members in order to evaluate their perceptions regarding the benefits and value of a blended learning approach, as implemented across three BEd Hons programmes. The scope of the perceptions was broadly formulated around what worked well, the strengths of the programme, what did not work well, the weaknesses, how the programme can be improved and the level of satisfaction. A six-step approach (see Chapter Five) was used to code and analyse the transcribed data in terms of themes, sub-themes and connections.

4.7 VALIDITY AND RELIABILITY

In order to ensure that the fundamental aim of a study is reached, the research design needs to be evaluated. In order to evaluate the research design, constructs like internal and external validity need to be achieved. Clark-Carter (2010) defines internal validity as the degree to which the experimental treatment makes a difference, in other words, successfully demonstrates that changes in a dependent variable are caused by changes in an independent variable. External validity is the extent to which findings in one study can be applied to another situation and therefore be generalisable to other settings (Clark-Carter, 2010; Grinnell, Unrau & Williams, 2011).

In this study, the first step was to test the validity and reliability of the data that had been collected from survey respondents using Cronbach's alpha. In testing the validity of indicators, each item can be classified as a valid item if it has a factor loading greater than 0.40, level of significance at 95%, and clustering in each group of variables.

Aspects such as the acceptable response rate, the questionnaire that was based on other studies and the high percentage of staff members who were interviewed are characteristics of a reliable study.

4.8 ETHICAL CONSIDERATIONS

Ethics is defined as "a set of moral principles which is suggested by an individual or group, is subsequently widely accepted, and which offers rules and behavioural expectations about the most correct conduct towards experimental subjects and respondents, employers, sponsors, other researchers, assistants and students" (Strydom, 2005:57). Ethical principles should thus be internalised in the personality of the researcher to such an extent that ethically guided decision making becomes part of his/her total lifestyle (Strydom, 2005).

Multiple ethical guidelines serve as standards according to which researchers should evaluate their conduct. In particular, two basic categories of ethical responsibility relate to those who participate in the study and to the discipline itself, where reporting of research results must be accurate, honest, credible and authentic (Gravetter & Forzano, 2009). It is imperative to promote research integrity, protect the confidentiality of participants and disclosure of information, as well as guard against research misconduct (Israel & Hay, 2006; Creswell,

2009). In South Africa, most leading universities require that all research involving human respondents be reviewed by an independent Research Ethics Committee (REC) before data collection can commence (Israel & Hay, 2006). The present study was reviewed by the Departmental Ethics Screening Committee (DESC) as well as the Research Ethics Committee of SU, and ethical clearance was provided (refer to Addendum E; Addendum F). Seeing that the study involved both students and staff of SU, institutional permission to conduct the study was also secured.

4.8.1 Ethical issues in the research process

Important ethical issues in both quantitative and qualitative research include the need for anonymity, protection of sensitive information and participant confidentiality. In the present study, written voluntary informed consent (see Addendum B; Addendum D) was obtained from all participants. Data was de-identified and could not be directly linked to the participants' personal details. Data access was limited to the researcher, supervisor and statistician, and information will be securely stored electronically for a total of five years.

In addition, the reporting of study results should be objective, accurate and free from bias. Suppressing, falsifying or inventing findings is not an acceptable practice in research. Limitations, shortcomings or errors should be reported. These aspects are covered in Chapters Five and Six.

4.9 CONCLUSION

This chapter aimed to provide an overview of the research methodology applied within the study. The study adopted an applied, mixed method approach and programme evaluation was utilised to evaluate the implementation phase of the three new blended learning programmes. Formative evaluation was conducted in the form of electronic, self-administered questionnaires distributed to all the respondents of the BEd Hons programmes for 2017. Due to the unavailability of relevant questionnaires, a questionnaire was adapted and further developed that specifically focused on student satisfaction with a blended learning approach at honours level within Education. Data analysis was conducted, and all ethical considerations were paid attention to.

CHAPTER 5

RESEARCH RESULTS AND FINDINGS

5.1 INTRODUCTION

This chapter presents the results and findings of the sequential explanatory evaluation study. The purpose of the study, based on the goal and objectives explicated in Chapter One, was to evaluate the level of student satisfaction with a blended learning approach among postgraduate Education students. In addition, facilitators' perceptions with regard to the implementation of the programmes and factors considered to contribute to or detract from students' satisfaction, were analysed. Thus, narrative data were collected from in-depth, individual interviews with three programme coordinators, eleven lecturers, one tutor, and three professional or administrative staff at SU Faculty of Education. This chapter commences with an explanation of the research instrument used in the student survey. Then the students' survey results are discussed, followed by an explanation of the results from the facilitators' interviews in their capacity as programme coordinators, lecturers, tutors, professional and administrative staff members. Lastly, the strengths and weaknesses of the individual programmes are highlighted.

5.2 STUDENT SURVEY

5.2.1 Content and structure of the questionnaire

This section will give more background on what the researcher investigated through the questionnaire, the meaning of the ten questionnaire categories - which grouped test items together - and how to interpret the data. The data collection instrument, as explained in Chapter Four, was a self-structured online questionnaire which consisted of three sections. The first section covered the participants' demographic data (full-time/part-time status and programme enrolment status).

In the second section, the questionnaire items were grouped into ten categories to evaluate students' satisfaction, consisting of 48 statements using a 4-point Likert scale ranging from 1

= strongly disagree to 4 = strongly agree (see Addendum A). The Likert-type items were adapted from Sun et al. (2008), Palmer and Holt (2009) and Wang (2003), and included items such as: “Blended learning enabled me to have regular online contact with the tutor”; “Learning materials provided on the online platform allowed me to develop critical thinking skills”, and “I was satisfied with blended learning as an approach for interacting with the lecturer off-campus”.

The ten categories of questionnaire items were guided by previous studies which investigated factors that influence student satisfaction in online and blended learning environments in higher education (Reinhart & Schneider, 2001; Wu et al., 2010; Zhu, 2012). According to these studies the five factors that are most likely to influence student satisfaction are interface, the learning community, learning materials, personalisation, and the quality of technology. Broadly the evaluation focused on the individual, the programme and technology. Thus the questionnaire was constructed to include items in the following ten categories, namely the *programme and module material*, *academic support*, *interaction*, *programme content*, *interface*, *assessment*, *application*, *feedback*, *face-to-face versus telematics* and *overall satisfaction*. The category *programmes and module materials* contained items on, for example, the textbook, to what extent the material stimulated the students' interest and whether the amount of work was reasonable. *Academic support* included items on the tutoring of students, the guidance by lecturers, the participation of lecturers in discussion forums and online resources. *Interaction* required students to respond to items on having regular online contact, participating in discussion forums, sharing knowledge with peers and blended learning as an effective two-way communication channel. The category *Content* covered items on the learning materials provided (lecture notes, reading lists, journal articles, PowerPoint presentations and online activities), appropriateness of content for an honours programme, clarity of communication of the content and the development of critical thinking skills. Items in the category *Interface* focused on the learning management system used by Stellenbosch University (SUNLearn), and included items on the accessibility of SUNLearn anywhere at any time, the user-friendliness of SUNLearn, the reliability of learning technologies and telematic sessions as an effective learning tool. *Assessment* covered, inter alia, the alignment of module assessments with the learning outcomes and guidelines given to be able to complete tasks. The category *Application: Theory and practice* included items on the effectiveness of learning material to link theory to practice, being able to translate theory to real-world practical applications and

to what extent the online platform facilitated problem-solving skills. *Feedback* required students to respond to lecturers' constructive feedback on assignments, in addition to students' time management and mastering the material at their own pace. *Face-to-face versus telematic* contained items related to students' preference for telematic sessions or for face-to-face teaching. The last category focused on the level of *Satisfaction* with blended learning as far as interaction with lecturers, tutors and peers are concerned.

The third section of the questionnaire consisted of three open-ended questions, asking students about their overall satisfaction with the blended learning approach in the three programmes.

5.2.2 Internal reliability of questionnaire

When using survey data, it is important to ensure the reliability and validity of the instrument that is used to collect the data. Hence, the first step was to test the validity and reliability of the data that was collected from survey respondents, using Cronbach's alpha coefficient. In testing the validity of indicators, each item can be classified as a valid item if it has a factor loading larger than 0.40. For the reliability test using Cronbach's alpha, coefficients and item-to-total correlations were used to test the reliability of each variable. Cronbach's alpha coefficient was used to measure the internal reliability of the questionnaire based on inter-item correlations. All result categories had a Cronbach's alpha value greater than 0.60. Reliability across the categories ranged from "excellent" for the application dimension (0.94), assessment (0.91) and content (0.91) constructs, to "high" for the material dimension (0.90), interface (0.88), satisfaction (0.88), academic support (0.87), interaction (0.87) categories, "acceptable" for face-to-face versus telematics (0.78), and "moderate" (0.66) for the feedback category. The Cronbach's alpha reliability coefficient of the overall satisfaction scale was 0.86, indicating that the instrument was highly reliable.

5.2.3 Baseline characteristics of survey respondents

From the population of 109 postgraduate students enrolled in the three programmes in 2017, 36 participated in the survey - giving a response rate of 33%. However, due to four incomplete questionnaires, I could only work with the data provided by the final study sample of 32 students (29% response rate). The majority of the respondents (n=25; 78%) were enrolled in the Educational Support programme, with six students (19%) enrolled in the

Education Development and Democracy programme, and one student (3%) in the Language Education programme. In total, 17 students (53%) studied full-time, while 15 students (47%) studied part-time.

5.3 QUESTIONNAIRE RESULTS

5.3.1 Descriptive summary of results for the total study group

The descriptive summary of results obtained from the survey across the ten categories is provided in Table 5.1. The overall mean across the ten categories was 2.9, which was above the acceptable mean of 2.5 for student satisfaction with blended learning achieved in previous studies done by Giannousi, Vernadaki, Derri, Michalopoulos and Kioumourtzoglou (2009) and Naaj, Nachouki and Ankit (2012). Students' answers to question 12.1: "I would recommend this programme to another student", indicate that 72% of the students would recommend the programme while the remaining 28% expressed a negative opinion. The sample mean for this question was 3.28 (SD = 0.92).

Descriptive summary of results obtained for the ten questionnaire categories for the total study group is presented as the means, along with the standard deviation (SD), as well as the lower and upper quartiles. The researcher used the results from the t-tests when analysing the categories and used non-parametric test results when reporting on the items from which the categories were computed.

Table 5.1: Descriptive summary of results for the total study group

| Questionnaire categories | Total group (Mean/SD) | Lower Quartile | Upper Quartile |
|-------------------------------------|-----------------------|----------------|----------------|
| Material | 2.90 (0.83) | 2.30 | 3.50 |
| Academic support | 2.60 (0.78) | 2.20 | 3.20 |
| Interaction | 3.11 (0.75) | 2.60 | 3.70 |
| Content | 3.33 (0.67) | 3.00 | 4.00 |
| Interface | 3.07 (0.75) | 2.75 | 3.75 |
| Assessment | 2.87 (0.81) | 2.33 | 3.33 |
| Application | 2.96 (0.68) | 2.67 | 3.33 |
| Feedback | 2.68 (0.64) | 2.20 | 3.20 |
| Face-to-face versus telematics | 2.57 (0.82) | 1.80 | 3.20 |
| Satisfaction | 2.94 (0.72) | 2.83 | 3.33 |
| Overall student satisfaction | 2.90 (0.75) | 2.47 | 3.45 |

Although the differences between the data for the various categories were relatively small, when one looks at the mean one can clearly see that certain items were rated higher and others were rated lower. What can be deduced from Table 5.1 is that the respondents were overall satisfied with the content (3.33), interaction (3.11) and interface (3.07). The respondents were less positive about face-to-face versus telematics (2.57), academic support (2.60) and feedback (2.68). These results were confirmed by some of the qualitative responses such as: *“untimely and inadequate feedback by the lecturers on the assignments”* and *“lecturers do not respond to e-mail inquiries”*.

There were several comments made in the last three open-ended questions which served as guidelines to reflect and assess throughout the renewal process to sustain an effective teaching and learning environment. Overall, BEd Hons students highlighted new knowledge acquisition, the relevance of applying theory to practice and weekly updates of instructions on SUNLearn as satisfying aspects of the blended learning programmes. The value of the contact sessions, telematic sessions and weekly active online discussion forums were also emphasised as ways of creating a support network for students. Students also highlighted the value of sharing knowledge and gaining insight into the practicalities of the real world.

5.3.2 Descriptive summary of results for items focusing on blended learning

In Table 5.2 blended learning related items were grouped in response to students being satisfied or dissatisfied according to the 4-point Likert-scale responses, creating a connotation between a positive or negative blended learning experience. In Table 5.2, results are presented for individual items where the highest scores were evident. The median value for responses to items 6.1 (‘SUNLearn enabled me to gain easy access to up-to-date learning materials’), 6.4 (‘I could easily access my SUNLearn modules anywhere and at convenient times which suited my schedules’), 6.5 (‘It was easy to upload assignments using the online interface’) and 6.6 (‘The technology used for blended learning was reliable and consistent’) was 4.0.

Table 5.2: Summary of descriptive statistics for items focusing on blended learning

| No. | Survey items | Median | Lower Quartile | Upper Quartile | Likert Scale Response | | Meaning |
|------|---|--------|----------------|----------------|-----------------------|---------------------------|----------|
| | | | | | Agree/satisfied (%) | Disagree/dissatisfied (%) | |
| 4.1 | Blended learning enabled me to have regular online contact with the tutor. | 3.00 | 1.00 | 3.50 | 57 | 43 | Agree |
| 4.2 | Discussion forums provided an online platform for me to engage with other students. | 3.00 | 3.00 | 4.00 | 79 | 21 | Agree |
| 4.3 | Blended learning enabled me to share knowledge with other students. | 3.00 | 3.00 | 4.00 | 89 | 11 | Agree |
| 4.4 | Blended learning provided an up-to-date electronic two-way communication channel between students and tutors. | 3.00 | 2.00 | 4.00 | 64 | 36 | Agree |
| 4.5 | I found it easy to participate in online discussion forums (student-to-student). | 3.00 | 2.00 | 4.00 | 66 | 34 | Agree |
| 5.4 | Learning materials provided on the online platform allowed me to develop critical thinking skills. | 3.00 | 3.00 | 4.00 | 86 | 14 | Agree |
| 5.5 | A blended approach made it easy for me to choose what materials will help me to learn. | 3.00 | 2.00 | 4.00 | 74 | 26 | Agree |
| 6.1 | SUNLearn enabled me to gain easy access to up-to-date learning materials (e.g. study resources and manuals). | 4.00 | 3.00 | 4.00 | 81 | 19 | Agree |
| 6.2 | Telematic broadcasts were an effective learning tool guiding me through the course. | 3.00 | 3.00 | 4.00 | 77 | 23 | Agree |
| 6.3 | The design, layout and format of the online platform were easy to use. | 3.50 | 3.00 | 4.00 | 81 | 19 | Agree |
| 6.4 | I could easily access my SUNLearn modules anywhere and at convenient times which suited my schedules. | 4.00 | 3.00 | 4.00 | 92 | 8 | Agree |
| 6.5 | It was easy to upload assignments using the online interface. | 4.00 | 3.00 | 4.00 | 92 | 8 | Agree |
| 6.6 | The technology used for blended learning was reliable and consistent. | 4.00 | 3.00 | 4.00 | 92 | 8 | Agree |
| 6.7 | The SUNLearn platform facilitated the development of competency in online technologies. | 3.00 | 3.00 | 4.00 | 92 | 8 | Agree |
| 7.3 | Clear guidelines were provided for completion of online assessment tasks. | 3.00 | 2.00 | 4.00 | 73 | 27 | Agree |
| 9.2 | Online learning helped me with my time management. | 3.00 | 3.00 | 4.00 | 80 | 20 | Agree |
| 10.1 | I attended the telematic sessions. | 3.50 | 2.00 | 4.00 | 69 | 31 | All |
| 10.2 | I preferred telematic sessions to face-to-face teaching and learning approaches. | 3.00 | 1.00 | 3.00 | 54 | 46 | Agree |
| 10.3 | My experience of telematic learning was similar to that of face-to-face | 2.00 | 1.00 | 3.00 | 42 | 58 | Disagree |

| | | | | | | | |
|--|--|------|------|------|-----|-----|-----------|
| | contact. | | | | | | |
| 10.4 | Telematic sessions contributed to my positive experience with the programme. | 3.00 | 2.00 | 4.00 | 62 | 38 | Agree |
| 10.5 | If I had a choice, I would prefer attending more face-to-face contact sessions with my lecturers. | 2.00 | 1.00 | 3.00 | 38 | 62 | Disagree |
| 11.1 | I was satisfied with blended learning as an approach for interacting with the lecturer off-campus. | 3.00 | 3.00 | 4.00 | 80 | 20 | Satisfied |
| 11.2 | I was satisfied with the online accessibility and availability of the lecturer. | 3.00 | 2.00 | 3.00 | 64 | 36 | Satisfied |
| 11.3 | I was satisfied with the quality of interaction with tutors. | 3.00 | 2.00 | 3.00 | 56 | 44 | Satisfied |
| 11.4 | I was satisfied with the online platform to facilitate interaction with other students. | 3.00 | 3.00 | 4.00 | 77 | 23 | Satisfied |
| 12.1 | I would recommend this programme to another student. | 3.50 | 3.00 | 4.00 | 81 | 19 | Agree |
| 12.2 | Overall, I was satisfied with the programme. | 3.00 | 1.00 | 4.00 | 73 | 27 | Satisfied |
| Overall Satisfaction with blended learning (Simple means rounded to 1) | | 3.00 | 2.00 | 4.00 | 73% | 27% | Satisfied |

BEd Hons students highlighted that the most satisfying aspects of the new blended learning programmes were obtaining more and deeper knowledge relating to their field of work, and the relevance of practical approaches to theory. This was illustrated by the following comment: *“The amount of mental stimulation, the breadth of knowledge that was shared and insight into the world of educational support was a great experience”*.

Students also appreciated the instructions uploaded weekly on SUNLearn to be able to better manage their time. Furthermore, students agreed that the weekly discussions, telematic sessions and contact sessions helped them to keep in touch with their peers, but also to create a supportive network to share practices – *“Work for modules were uploaded weekly (some well in advance, so you could get on with assignments), so you could pace yourself and keep up; telematics are better than having to drive to campus”*. Moreover, *“Attending class in the school holidays facilitated meeting other students and keeping in touch, having a support group”*. Students also highlighted the fact that they could attend the course from their home country without having to relocate to South Africa.

Despite lots of positive feedback, there were still vital shortcomings and challenges to the new blended learning programmes. One student made the remark that he/she would prefer face-to-face to be able to ask more questions and to receive answers on the spot. Another student missed having personal interaction with the lecturers, and felt that lecturers were less involved due to the blended approach: *“having lecturers who are not as involved as they should be with no real interaction or assistance when e-mails were sent”*. Also, a few students complained that some lecturers did not reply to their enquiries nor took part in the online discussions.

The majority of the group felt the new blended approach could cause unnecessary confusion due to *“unclear instructions”*. Students suggested that having a tutor to assist with the modules would have been helpful, especially when they were seeking help when they did not understand the assignment.

However, some students emphasised that they still preferred face-to-face teaching strategies, and felt that such sessions could be used more constructively as part of the blended learning programmes. A flipped-classroom model was suggested by some students as a possible solution. In addition, students lamented the fact that some lecturers had to cancel telematic sessions at short notice. A lack of timely and constructive feedback and adequate communication was emphasised by quite a few students.

Some students preferred having face-to-face contact sessions for its advantages as a traditional classroom environment, such as students having access to peers and academics, and group discussions and practice-related matters which could further be extended into additional interesting topics that are relevant in practice. The face-to-face sessions also contributed to preparing the students for the gradual development of complex theories (Kaur, 2013).

5.3.3 Impact on student satisfaction

Figure 5.1 illustrates overall levels of satisfaction with the ten categories and shows that learning material and content, interaction, interface and application had a positive (above 3.0) impact on student satisfaction, as illustrated in the box and whisker plot, which consists of the

minimum and maximum, the lower and upper quartile and the median. However, face-to-face versus telematics, academic support, feedback and assessment demonstrated low levels of student satisfaction - with values of 2.5-2.67.

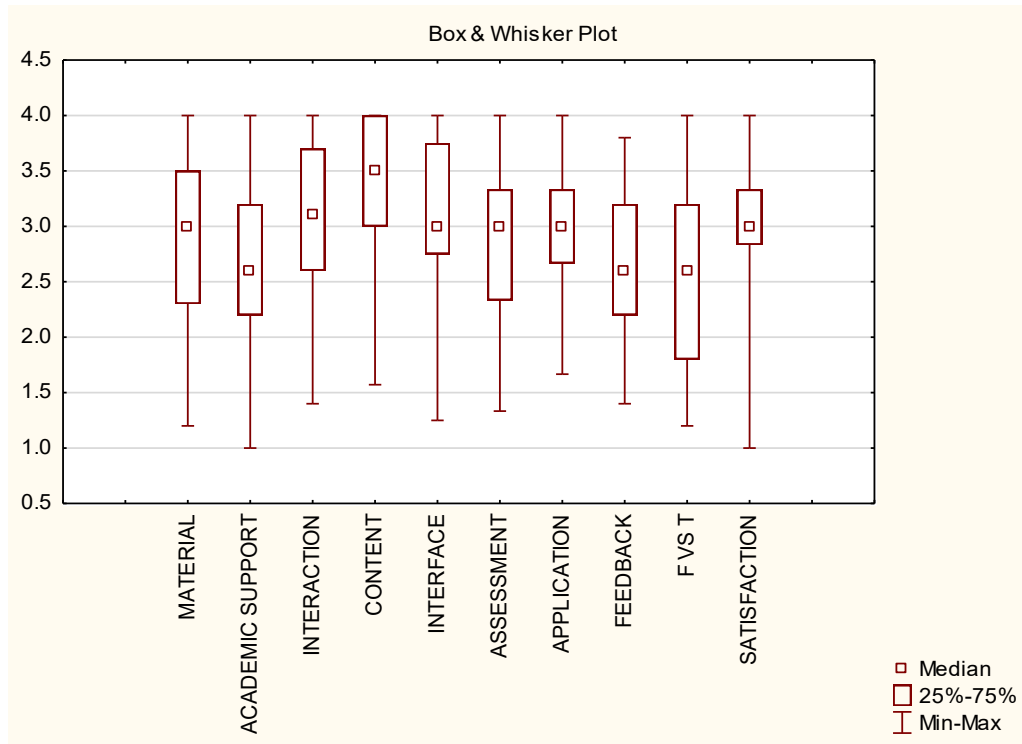


Figure 5.1: Impact on student satisfaction

To conclude, the students' unhappiness also had to do with the lecturers' lack of buy-in and utilisation of blended learning (*"Having lecturers who are not as involved"; "The most challenging thing about the degree was the waiting period to get our marks for some of the assessments"*). Many lecturers wanted students to send their queries by e-mail, but it took too long to answer the queries (*"It seems as 'some' of the lecturers have no time to reply to students queries."*). Furthermore, in the open-ended questions, the students highlighted the need to review the assignment schedule structure, to improve the workload distribution, to increase the relevance of reading material and to provide extra video content as well as additional learning activities on SUNLearn. A lack of timeous and constructive feedback (*"some assignments were only marked at the end of the semester", "waiting period to get our marks for assessments", "never responding", "too little interaction"*) was also emphasised as frustrations by the students.

5.3.4 Comparison of part-time and full-time students

Table 5.3 compares the results of part-time and full-time students in the ten categories, using the t-test. Results are presented as the means and standard deviation provided along with unadjusted p-values, which indicate the statistical significance of the differences between the two groups (Nel, 2018). T-tests are preferred to illustrate this comparison, since it is a robust test which does well even for data that may not be normally distributed. All the p-values are indicative of complete non-significance (i.e. none of them are smaller than 0.05). The Mann-Whitney tests that were done also confirmed the results of the pooled t-tests.

Part-time and full-time students did not differ significantly in their questionnaire responses across any of the ten categories ($p > 0.05$), as shown in Table 5.3. Whereas full-time students do the programme of 120 credits over one year, part-time students extend their study period of two years. This was explained as follows by an administrative staff member: "*The students who usually work full-time prefer to do the extended programme over two years and they do only part of the modules in the first year and the rest in the second year*". In the first year, part-time students complete five of the eight modules and the remaining three modules (including the research project) in the second year.

Even though the differences between the two groups were not statistically significant, one can infer from comparing the means in Table 5.3 that part-time students on the whole were less satisfied with the programmes than their full-time counterparts. This was probably the effect of greater pressure on part-time students to balance their studies with a full-time job and, in many cases, family responsibilities. Having less time available to spend on their studies than full-time students, part-time students found it difficult to cope with challenges posed by the blended learning approach.

Table 5.3: Comparison of the ten questionnaire categories between part-time and full-time students

| Questionnaire Categories | Part-time students (Mean/SD) | Full-time students (Mean/SD) | p-value (Part vs. full-time) |
|--------------------------------|------------------------------|------------------------------|------------------------------|
| Material | 2.83 (0.85) | 2.98 (0.82) | 0.62 |
| Academic support | 2.46 (0.72) | 2.75 (0.83) | 0.32 |
| Interaction | 3.01 (0.79) | 3.22 (0.70) | 0.48 |
| Content | 3.31 (0.61) | 3.36 (0.76) | 0.84 |
| Interface | 2.86 (0.71) | 3.31 (0.75) | 0.13 |
| Assessment | 2.71 (0.65) | 3.06 (0.95) | 0.29 |
| Application | 2.86 (0.55) | 3.08 (0.82) | 0.41 |
| Feedback | 2.64 (0.47) | 2.72 (0.81) | 0.77 |
| Face-to-face versus telematics | 2.47 (0.82) | 2.68 (0.83) | 0.52 |
| Satisfaction | 2.75 (0.80) | 3.15 (0.58) | 0.16 |

The main concerns voiced by both part-time and full-time students related to feedback and communication. Students requested more consistent feedback and regular interaction with the lecturers. Timeous feedback on assignments was needed in order to know how to improve on the next assignment. Students were frustrated when they struggled to get hold of lecturers, as this made it difficult to complete the expected task when they were unsure of what they were supposed to be doing. One dissatisfied part-time student stated: *“Lecturers not responding to e-mails especially when you are seeking help when you do not understand...”*.

Students regarded time management as a priority, especially as many of them were full-time employed educators. In this regard the flexibility of the blended approach suited part-time students well: *“It was the best option for me as I work full-time as a teacher and also being a single parent. I could easily manage my time around this as I didn't have to attend classes in Stellenbosch. It worked really well - attending class only a few days during the school holidays and the rest you can do at home.”* Another part-time student concurred as follows: *“This was and still is an amazing opportunity to participate in this program. I would never have been able to register for this course if it was presented in the traditional way. The blended learning platform allowed me to work part-time, study, be a mother and still manage my time for studies. The streaming of telematic sessions meant that I could ‘attend’ class while having my kids at home with me. The course content is great, and I also really enjoyed the face-to-face classes during holidays. I have met some great fellow students who are an additional source of knowledge and support to me”*.

5.3.5 Comparison of questionnaire responses between honours programmes

For comparative purposes, the one student enrolled in the Language Education programme was grouped with the six students enrolled in the Educational Development and Democracy programme, and this group was then compared to the Educational Support programme students, as shown in Table 5.4. At first, the results for all three programmes were compared, but as there was only one ($n = 1$) respondent for the Language Education programme, a variance analysis would not be possible (Nel, 2018).

The overall mean for student satisfaction in the independent programme factor was 2.90 for Educational Support and 2.91 for Education Development and Democracy programme. The category that had the highest mean for the Educational Support programme was ‘content’ (3.41), while ‘overall satisfaction’ scored the highest mean (3.29) for the Education Development and Democracy programme. This suggests that students in that programme were generally satisfied with interaction and learning material. The category with the lowest mean in Educational Support was ‘academic support’ (2.50) and in Education Development and Democracy programme ‘face-to-face versus telematics’ had the lowest mean (2.25). These low scores may be due to the unfamiliar blended approach and the preference for personal interaction within the academic environment. Besides the above variances, the biggest differences between the programmes were the ‘content’ category (3.41 for Educational Support and 2.89 for Education Development and Democracy) and ‘academic support’ (2.50 for Educational Support and 3.12 for Education Development and Democracy).

Table 5.4: Comparison of the ten questionnaire categories between programmes

| Questionnaire Category | Educational Support (Mean/SD) (2.90) | Education Development and Democracy (Mean/SD) (2.91) | p-values (Support vs. Development and Democracy) |
|------------------------|--------------------------------------|--|--|
| Material | 2.91 (0.78) | 2.90 (1.08) | 0.98 |
| Academic support | 2.50 (0.75) | 3.12 (0.78) | 0.10 |
| Interaction | 3.12 (0.75) | 3.05 (0.82) | 0.87 |
| Content | 3.41 (0.57) | 2.89 (1.06) | 0.16 |
| Interface | 3.05 (0.71) | 3.19 (1.07) | 0.74 |
| Assessment | 2.82 (0.76) | 3.17 (1.11) | 0.44 |
| Application | 3.03 (0.67) | 2.58 (0.74) | 0.24 |
| Feedback | 2.68 (0.65) | 2.65 (0.62) | 0.93 |

| | | | |
|--------------------------------|-------------|-------------|------|
| Face-to-face versus telematics | 2.63 (0.84) | 2.25 (0.72) | 0.41 |
| Satisfaction | 2.87 (0.75) | 3.29 (0.48) | 0.29 |

In spite of the variances between the two programmes, illustrated by Table 5.4, there were no statistically significant differences in results obtained for the ten questionnaire categories between the study programmes ($p > 0.05$). From this, the researcher deduces that the students across programmes were relatively satisfied with the programme content, interaction and interface. There was no significant difference between the programme groups.

High levels of satisfaction were also illustrated by the qualitative responses, as substantiated by the following student remark: *"The [Educational Support] program content was excellent. I learned so much and my world worldview expanded...it has practical application value"*.

5.3.6 Descriptive analysis of individual item low- and high-scoring responses

In Table 5.5 results are presented for individual items across three categories where the median was below the acceptable level of 2.50. Responses to four items had the lowest median value of 2.0, namely item 3.1 ('Academic support was accessible when I needed it'), 9.1 ('The lecturers provided constructive feedback following completion of assessments'), 10.3 ('My experience of telematic learning was similar to that of face-to-face contact') and 10.5 ('If I had a choice, I would prefer attending more face-to-face contact sessions with my lecturer').

Table 5.5: Descriptive statistics of the three lowest-scoring items in their respective categories

| No. | Survey items | Median | Lower Quartile | Upper Quartile |
|--------------------------------|--|--------|----------------|----------------|
| Academic support | | | | |
| 3.1 | Academic support (e.g. tutoring, consultations) was accessible when I needed it (tutor-to-student) | 2.00 | 1.00 | 3.00 |
| 3.2 | The lecturers guided and supported me appropriately | 3.00 | 2.00 | 3.00 |
| 3.3 | The lecturers regularly participated in online discussions forums | 3.00 | 2.00 | 3.00 |
| 3.4 | The tutors regularly participated in online discussions forums | 2.50 | 1.00 | 3.00 |
| 3.5 | The online resources were clear and easy to understand. | 3.00 | 2.00 | 3.00 |
| Feedback | | | | |
| 9.1 | The lecturers provided constructive feedback following completion of assessments. | 2.00 | 2.00 | 3.00 |
| 9.2 | An online blended learning approach helped me to master the learning material at my own pace. | 3.00 | 3.00 | 4.00 |
| 9.3 | Online learning helped me with my time management. | 3.00 | 3.00 | 4.00 |
| Face-to-face versus telematics | | | | |
| 10.1 | I attended the telematic sessions. | 3.50 | 2.00 | 4.00 |
| 10.2 | I preferred telematic sessions to face-to-face teaching and learning approaches. | 3.00 | 1.00 | 3.00 |
| 10.3 | My experience of telematic learning was similar to that of face-to-face contact. | 2.00 | 1.00 | 3.00 |
| 10.4 | Telematic sessions contributed to my positive experience of the programme. | 3.00 | 2.00 | 4.00 |
| 10.5 | If I had a choice, I would prefer attending more face-to-face contact sessions with my lecturers. | 2.00 | 1.00 | 3.00 |

A minority (n=11, 42%) of students agreed with the statement in 10.3 that the experience of telematic learning was similar to that of face-to-face contact, while 15 (58%) students disagreed with the statement. The median for this question was 2.0. In contrast, a majority (n=16, 62%) agreed with the statement in 10.5, namely that they would prefer to attend more face-to-face sessions with lecturers, yet the median for this question was also 2.0.

5.4 RESULTS FROM THE FACILITATORS' INDIVIDUAL INTERVIEWS

Semi-structured interviews were conducted from 4-11 June 2018 with three programme coordinators (including one acting coordinator for 2017), eleven lecturers (including the convenor for the compulsory module), a tutor and three professional or administrative staff at the SU Faculty of Education (FOE) to explore their perspectives on the first year of

implementation of the three honours programmes that adopted a blended learning approach. Interviews were audiotaped and then transcribed. Thematic analysis was done to identify repeated patterns of meaning (see Figure 5.2). Six themes were identified using the thematic analysis method, viz. 1) support, 2) content, 3) new modes of offering, 4) interaction as the way to engagement, 5) barriers to learning and development, and 6) opportunities for lifelong learning.

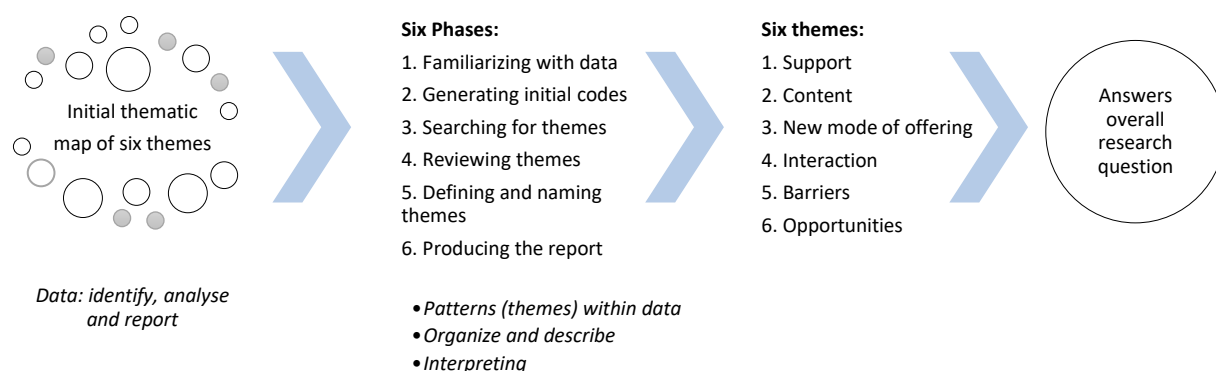


Figure 5.2: The process of qualitative thematic analysis (Adapted from: Howitt & Cramer, 2008; Braun & Clarke, 2013)

The six themes identified from the interviews with staff members are now discussed with supporting quotes for clarification:

5.4.1 Availability of student support

An administrative staff member mentioned that students had specific expectations of the academics' roles, the student's responsibility and expectations of the new blended learning programmes. This was concurred by two lecturers: *"they [students] have different expectations of what should happen in the educational settings"*; *"it comes back to expectations and a memo of agreement...so that everybody knows exactly and once again, it comes back to the planning of the online learning experience"*. The expectations of students could be met by, inter alia, the orientation programme, contact sessions and the online platform.

The orientation programme is critical in explaining what is required from students when approaching learning by using an online blended programme. Orientation sessions are therefore held as a good opportunity to make students aware of their requirements, as well as

to teach them how the online platforms work and how to approach blended learning for maximum output.

Initial contact sessions were identified as useful in establishing a relationship between lecturers and students. Two contact session periods across the year were found to be useful in facilitating the smooth implementation of the programmes. The addition of telematic sessions and online discussions on SUNLearn helped enhance student engagement by providing a platform for academic contact and dialogue between staff and new students. The above is confirmed by an administrative staff member's comment that *"block sessions worked very well"*, which was agreed to by a programme coordinator: *"the contact sessions during their holidays... suited the students much better than the residential programme. So, to me, that was a strength."*

Several lecturers highlighted the need for tutors and more academic support, especially regarding the research projects, with remarks such as *"to grow the programme soon you start having large [student] numbers, not quite possible for lecturers to always give feedback timeously"*. Lecturers also stressed the importance of clearly stipulating the role of the tutor. For example, the tutor could be helpful when the students are preparing assignments by engaging with students having difficulties with the assignments. Other lecturers also noted the importance of available technical assistance for students who seek additional help on how to optimally utilise the blended learning online platform.

5.4.2 Content

A lecturer identified the programme renewal and reviewing the content as strengths of the blended learning programmes to ensure improvement, refinement and to maintain relevance with the changing world, as he/she stated: *"as lecturers, we need to keep reflecting critically on what it is we're doing, also pedagogically and how the pedagogy and the technology is working together"*. Furthermore, lecturers emphasised the importance of new learning content for the new programmes, and a different way of organising it. A staff member highlighted the up-to-date nature and relevance of the new, improved content by stating: *"the newness of the subject, but also the relevance given the Western Cape context and of course, the Education Department's additive approach to multilingual language policy"*. Other remarks pertained to the organisation of the content: *"the programme and content itself was*

well organised and laid out very clearly", and managing the learning experience: *"in Education, being a teacher is not only about content, it's about the way in which we manage the learning experience"*. A programme coordinator underscored the importance of integrating the programme content and the research project: *"there's this challenge of mastering the content and then moving on with the content of the research project"*. An additional point highlighted by lecturers is that, with the renewal of the programmes, academics are compelled to think about content and to rethink their teaching and learning practices: *"it was a good stimulus for discussion around programme renewal"*.

5.4.3 New modes of offering

The success of the new mode of blended learning is dependent upon support, monitoring and responding to students' needs. Some lecturers stressed the importance of clearing up any misconceptions or incorrect understandings in using blended learning. For example, SUNLearn's tools and other aspects are central to blended learning. One lecturer claimed: *"one of the nicest aspects of SUNLearn is the assessment tool"*, therefore lecturers need to fully understand and get to know the new mode and the learning management system in order to get the maximum benefit. Lecturers agreed that they were required to think differently about teaching and learning in the context of programme renewal and the online learning platform. One lecturer noted greater awareness of the possibilities and potential offered by blended learning, which holds promise also at undergraduate level. Lecturers will have to think critically about the approaches necessary to ease the transition to a new curriculum and learning model, particularly to enhance student participation. A programme coordinator acknowledged being *"more aware of all the possibilities of blended learning, I think that it also influenced my teaching at the undergraduate level"*.

Contradictory views were voiced among lecturers regarding the blended learning approach, the mode of teaching and learning and the learning technology tools. One lecturer was negative about the telematic sessions: *"Telematic session, in my opinion, is an absolute waste of time"*, while other lecturers' experience was that the combination of the telematic sessions with traditional face-to-face interactions optimised learning. One lecturer was uncertain whether students understood the rationale for blended learning, while another commented: *"SUNLearn is really an amazing platform; the problem is we don't know how to use it properly. I don't always know how to ask the right question to get support"*.

5.4.4 Interaction as the way to engagement

Lecturers emphasised that the online platform should not be one-directional, but should retain promote engagement by two-way communication and interaction with students. Ideally, students should be organised into groups to promote peer learning, and form communities of practice through participation in online activities. Some lecturers agreed that discussion forums were useful in promoting engagement among students: *"The discussion forums were quite effective in creating spaces for students to engage with each other"*. This was confirmed by an administrative staff member: *"The discussion forum works well for me, it's dyadic in a way whereby the students have to engage with the academics"*. Additionally, a lecturer expressed the advantages of group work: *"To purposefully and intentionally put students in groups, structure activities that students had to do in pairs within the groups, for some form of peer learning and community of practice"*. The tutor was also highlighted as an important role-player in facilitating student participation and engagement.

The participants had mixed responses with regard to the telematics sessions. Some staff members defended telematics as being a reasonable method for enhancing interaction since it has the advantage of being secure, robust and readily available. On the other hand, one lecturer had an issue with students' lack of participation in the telematic sessions: *"If students do not log in and engage, no interaction would be possible"*.

The importance of the contact weeks for promoting interaction was also recognised, as mentioned by a lecturer: *"During contact sessions, everyone had a chance to meet one another and establish a relationship that facilitated the on-going learning in the module"*. A tutor emphasised that *"students need to be independent learners, who work with readings, share with peers and new knowledge independently"*. The tutor highlighted that students need to delve deeper into their postgraduate studies, take ownership, engage with theory and build a relationship and support structure instead of always falling back on academic support.

5.4.5 Barriers to successful implementation of blended learning

Interviews with academic staff, lecturers and programme coordinators highlighted several challenges to the successful introduction of blended learning at the SU FOE, as illustrated by the following comment: *"we still need to get to a point where we can use the online platform productively, it remains a challenge"*. Firstly, lecturers noted that they were not always aware of their roles and responsibilities as educators when comparing the challenges and realities of blended learning to that of the traditional classroom format. Several lecturers further noted that the online system was not user-friendly for students, as articulated in the following extract: *"they [students] don't like the e-mails and sorry, they don't like SUNLearn, the logging in process and going through it"*. Lecturers also complained about administrative requirements such as securing copyright for material that was uploaded in the LMS: *"frustrating to keep the copyright for the articles that we had to put on SUNLearn"*. They also found that responding to student inquiries was time-consuming: *"the demands on the lecturers increased substantially, we simply don't have time"*. Moreover, academics felt that students often underperformed due to a lack of digital literacy and understanding of blended learning: *"if their digital literacy wasn't at a certain level they struggled to interact"*. Lecturers acknowledged that digital literacy of both students and staff was a challenge: *"the biggest issue was the technical capacity of both staff and students"*. Lastly, several lecturers emphasised the need for further financial support to ensure the success of blended learning at FOE in future.

5.4.6 Opportunities for lifelong learning

In these BEd Hons programmes blended learning seeks to create an opportunity for students to study while working as educators. Students across a broader geographic range could participate in the Honours programmes, compared to a traditional residential learning approach. Furthermore, the programmes have a fair amount of flexibility (part-time and full-time being one form of flexibility as an example), thereby accommodating the workloads and personal challenges of students without them having to withdraw from this learning opportunity.

Interviews with lecturers and academic staff emphasised the value of blended learning as a tool to promote flexibility. Firstly, blended learning allows lecturers to *"think in a different*

way" about their course content and delivery. In addition, blended learning supports flexibility in terms of accommodation, both for students from different provinces as well as for working teachers. Therefore, blended learning could add value by accommodating students across physical barriers in keeping with the principles of distance learning. Lastly, blended learning offers a valuable opportunity to engage already employed teachers in the learning process. One lecturer remarked: *"we are working with the future of education, contributing to education in the country by upskilling teachers"*.

5.5 THE IMPLEMENTATION PHASE FROM AN INDIVIDUAL PROGRAMME PERSPECTIVE

5.5.1 Strengths

For the academics, 2017 was a new experience with a fully blended learning approach at Honours level. The programme renewal process progressed from a conceptual level (different pedagogy and institutional requirements) to the practical side (staff preparation and training). All of these positives came about regardless of the different levels of academic expertise, abilities and capabilities that were involved. There were multiple viewpoints from the lecturers and administrative staff about the positive outcomes during the implementation phase, which will be further discussed from an individual programme perspective.

5.5.1.1 Educational Support

Regarding the Educational Support programme, lecturers were of the opinion that the fact that the course content was available on SUNLearn before the contact sessions, resulted in most students being prepared for the lectures. Secondly, the regular communication with students and the weekly uploading of instructions worked well. In addition, the technical support was reported to be excellent. The constant communication between the different modules within the Education Support programme was deemed as helpful and, lastly the video recorded to support the students with the research project worked well.

5.5.1.2 Educational Development and Democracy

What worked well in the Educational Development and Democracy programme, was that students were able to resonate the theory that they were taught with their real life

experiences. Secondly, the online approach provided more feedback to students and, lastly, the uploading of material before the telematic sessions resulted in the sessions being more interactive.

5.5.1.3 Language Education

In the Language Education programme students living in the vicinity of Stellenbosch were invited to participate in telematic sessions on campus, which made the telematic sessions more interactive. Also, within this programme, the preferred choice of communication was via WhatsApp, the freeware cross-platform application.

To conclude, various strengths were mentioned with regard to the rollout of the programme, such as that students were intrigued by the newness of the modules. Furthermore, strengths that were mentioned are the flexibility offered to the students, the relevance of theory and the opportunity for the decolonisation of the curriculum. Lastly, these programmes facilitated 'learn-and-earn' opportunities.

5.5.2 Challenges

Despite the lecturers' constructive perspectives, the implementation process generated many challenges. There were three different programmes with new content and a new mode of the offering. However, based on the number of applications received for 2018-2019, current students are positive about their experience. In addition, two further new programmes (one in Foundation Phase Education and one in Curriculum Inquiry) are being implemented over the next two years, which will provide additional challenges. Therefore, it is important that the feedback received will be acted upon to make improvements where needed.

5.5.2.1 Educational Support

The viewpoints of the Educational Support lecturers were that the large student numbers were their biggest challenge. In addition, reference was made to problems that international students experienced with regard to assignments, particularly the assignment that required a visit to an ABET centre. Furthermore, lecturers were unsure whether the students understood the rationale for the blended learning model. In general, they found that students still

preferred to communicate one-on-one, via e-mail or telephone, instead of using the online platform.

Education Support lecturers declared that the students should be encouraged to use the opportunity of material being made available beforehand to prepare themselves for contact sessions and broadcasts. They also suggested that research training videos, which can include problem-solving scenarios to assist the students regarding similar challenges in their classrooms, could be developed.

5.5.2.2 Educational Development and Democracy

The Educational Development and Democracy lecturers felt that the expectations of the students regarding this new mode of offering were sometimes beyond their capacity to fulfil, such as constant interaction and continuous feedback. Students had specific expectations of academics within this new mode of teaching and learning. Moreover, the new generation (Generation Z) student profile poses certain challenges, with students having poor academic writing skills proving to be a stumbling block. In addition, the larger student enrolments affected the lecturer-to-student ratio, leading to a perceived lack of support to students. The larger number of postgraduate students engaging in research projects also required additional academic support, increasing the workload of lecturers. Lecturers also felt that telematic broadcasts were a one-way teaching mode (rather than being more interactive), leading to students not being engaged during the sessions and also being less prepared.

Feedback from academics in the Educational Development and Democracy programme was that some students were still resistant to the online approach. Therefore, better communication with and support to students can improve the negative perceptions of this teaching mode. Secondly, lecturers expressed a need for more consistency in how modules in the programme are constructed (e.g. the work programmes for some modules follow weeks while others follow a different timeline, and a master assignment schedule across modules was required). Thirdly, some students struggled with the use of SUNLearn, therefore more technical support is needed and, lastly, questions arose about whether critical thinking and effective learning do take place via an online platform.

5.5.2.3 Language Education

In the Language Education programme, lecturers had to cope with the frustration of students with limited internet access, but also of older students having difficulty navigating the online platform. This points to the diverse student profile producing its own challenges such as the age factor regarding teaching experience, skill sets, computer literacy and willingness to be a lifelong student. Furthermore, quite a few students deregistered from the modules (or programme) because they underestimated the workload of the programme or because they already had a big workload at work as well as family responsibilities. Students should be able to communicate with one another about real-world issues and teaching experiences, so as to be able to form a supportive community of practice and to promote interaction. SUNLearn might not necessarily be the best medium to do that. To conclude, the student 'at risk' should be better monitored and assisted and will need a stronger support network.

5.5.2.4 Challenges in general

Academics from all three programmes posited that students dropped out due to their own workload, problems with time management and responsibilities at their schools; therefore, the Honours programmes should be better aligned to the needs of part-time students as working adults.

In conclusion: the lecturers affirmed the need for further training sessions for both lecturers and students on SUNLearn, and stressed the necessity of a compulsory orientation session and contact sessions twice a year. The importance of continuous evaluation was affirmed, and lastly, the need for a community of practice and reflective workshops to learn and share practice was pointed out. The priority of both lecturer and student should be to ensure that optimal learning takes place.

The above overview demonstrates that the very things that are strengths of the blended learning approach, are challenges too. The next phase will be to start reflecting on the pitfalls and how to improve for the next cycle of implementation.

5.6 DIFFERENCES BETWEEN STUDENT AND LECTURER PERSPECTIVES

This section is an interpretation of how the researcher perceived the views of the students and how these differed from the views of the lecturers.

From their feedback, one could see that the students were less satisfied with face-to-face versus telematics. However, that differed from the lecturers' view on the issue, as these two points were not the first issues that came up among the academic staff. The lecturers were worried about the new mode of offering, the 'at risk' student being part of a large group, the lack of technical skills and adequate resources, possible barriers (access and diverse student profile) to learning opportunities, and the effectiveness of learning. These concerns did not seem to play a role in the students' views.

In the last chapter, the discussion of the research findings, limitations of the study and recommendations are presented.

5.7 CONCLUSION

The most important findings, perspectives and themes were highlighted in this chapter. The overall satisfaction across the student questionnaire categories was above the acceptable cut-off level, which did not differ significantly between part-time and full-time students, with also no difference in results obtained between the three honours programmes. Learning material and content, interaction, interface and application had a positive impact on student satisfaction. However, face-to-face versus telematics, academic support, feedback and assessment affected student satisfaction rather negatively. The majority of students emphasised that they would still prefer face-to-face teaching, as challenges such as lack of timeous and constructive feedback and adequate communication was a concern.

The semi-structured interviews with staff presented six themes which emphasised the need to reflect and to ensure consistency and uniform levels of quality throughout the re-curriculation and implementation process. Furthermore, the success of blended learning being dependent on support, monitoring and responding to students' needs was underscored. In conclusion, academics will have to think critically about the approaches necessary to ease a transition to a new curriculum and learning model, particularly to enhance student participation and the online presence of lecturers. A more detailed discussion and evaluation of the results, as well as conclusions, recommendations and limitations of the study, are presented in Chapter Six.

CHAPTER 6

DISCUSSION OF RESEARCH FINDINGS, LIMITATIONS OF THE STUDY AND RECOMMENDATIONS

6.1. INTRODUCTION

In this mixed-method formative evaluation study, I sought to determine the level of student satisfaction with the first year of implementation of three new BEd Hons programmes at the Faculty of Education (FOE) of Stellenbosch University (SU). The goal of the study was achieved by attaining the three research objectives, listed in Chapter One. Towards this goal, an online survey was used to measure students' satisfaction with a range of programme elements. In addition, by means of semi-structured interviews, the perspectives of academic and administrative staff were gathered with regard to their experiences of the blended learning approach in the three programmes. Lastly, insights gained from the above investigation were used to identify factors that could contribute to or detract from students' satisfaction with the programmes. In particular, I focused on learning material, academic support, interaction, content, interface, assessment, application, feedback, face-to-face versus telematics and overall student satisfaction.

6.2 DISCUSSION OF MAIN RESEARCH FINDINGS

6.2.1 Synopsis of main research findings

The most important finding from this study was that postgraduate students were, on the whole, satisfied with their experience of the revised Honours programmes, supporting the implementation of blended learning at the SU FOE. Benefits extended to academics, who noted that blended learning broadened the variety of teaching methods in a dynamic and complex environment. Blended learning also supports greater accessibility for the 'learn-and-earn' market and for international students across borders. The study adds to the existing body of knowledge by highlighting some crucial aspects that should be considered when planning the offering of programmes in a blended mode such as the balance between student

satisfaction and quality, the importance of academic support, structure and strategy, and online interaction as a way to engage.

The descriptive summary of results obtained from the student survey showed that the overall mean across the ten categories was 2.90, which was above the acceptable cut-off level of 2.5. The survey results are consistent with findings reported by Ham and Hayduk (2003) who demonstrated correlations between various quality factors, teaching mode and student satisfaction. In the present study, students were most satisfied with content (3.33), followed by interaction (3.11), interface (3.07), application (2.96) and overall (2.94). The fact that interaction had the second highest mean, supports Cuthbert (1996) who found that the most important contributor to satisfaction is the value of interaction (interpersonal skills). In the present study, students expressed satisfaction with involvement and contact with peers, lecturers and 'student-friendly policies and procedures' (O'Neill & Palmer, 2004). Clewes (2003) highlights that the process of teaching and learning is a central part of students' evaluation of quality and student satisfaction. In this study, students found the blended programmes to be more convenient than the traditional face-to-face programmes, mainly due to the flexibility of blended programmes. The content was found to be comprehensive, outcome-based and incorporating current and relevant references. The depth of the content was sufficient, the level was correct for postgraduates and the material relevant to the South African context. The learning material was perceived as being very useful and helpful for the students and an easy teaching tool for the lecturers. Whereas the content was readily available on the online platform, the platform created navigation confusion, login frustration and was not very user-friendly for submitting and uploading activities.

6.2.2 Institutional alignment and policies

Taylor and Newton (cited in Owston, 2013) stress the critical importance of alignment of institutional goals with all stakeholders' goals on campus (cf. Goldman, 2005). This could imply that academics must put aside their own personal needs and be committed to the common goal of realising the institution's vision. Moreover, leaders such as programme coordinators need to be able to bring the team together and to convince everybody of the programme's value. Bottom-up change cannot occur without a supportive senior

administration and an institutional culture that values and supports pedagogical experimentation. Garrison and Vaughan (2008) conclude that bottom-up change can be complex and slow, but it will lead to sustained change.

Complying with various national policies was also of critical importance for the approval and accreditation of the new programmes. For example, the FOE had to clearly communicate to the postgraduate students that the telematic broadcasts were important to ensure that the national requirements in terms of contact time for the programmes were met; therefore, the sessions were compulsory to attend. Moreover, it was essential to clearly determine how blended learning supports student success with the institution also meeting its mission and goals. It was also imperative to stress the importance of sufficient funding, as well as the importance of preparation time to achieve the desired outcomes of a blended learning initiative (Piper, 2010).

In addition to the increased use of open education resources and the effortless sharing of materials enabled by the internet, ownership of intellectual property is an issue in blended learning implementation (Wallace & Young, 2010). Policies regarding ownership and accessibility of materials need to be established up-front (Graham et al., 2013).

6.2.3 The need for support

Academic staff and students need continuous support throughout the planning, development and implementation of the programmes. Firstly, there is a need to invest in lecturers' training, which will allow effective use of the online platform, as well as easier integration and selection of different ICTs. This will ensure more effective interactive practices, particularly during telematic broadcasts. Secondly, students should be able to explore the different support and training resources available on campus, whilst having sufficient time to familiarise themselves with the use of SUNLearn and learning how to interact during the telematic sessions. Thirdly, support is required to create and update an online resource web page that consists of self-help guides and an online support forum that can provide assistance and where a community of practice amongst students can be built. Implementation of innovation often focuses on programme adoption without defining the transition from the

individual's (the stakeholder's) challenges to institutionalisation. Individual academics could have strategic reasons to adopt a blended learning approach that are similar to or different from those of the institution (Casanovas, 2010). A disconnect between top-down policy and bottom-up culture can inhibit the growth of an innovation like blended learning (Casanovas, 2010). Clear institutional direction and policies are vital to successfully adopting a blended learning initiative (Garrison & Kanuka, 2004). Within the FOE, the BEd Hons programme committee members had to strategically address issues and opportunities that emerged during the implementation phase.

6.2.4 Pedagogical professional development

The effective implementation of blended learning depends on the commitment and collaboration of all academics involved in the programmes concerned (Garrison & Vaughan, 2008). A further key component of successful change is taking a community approach to invest in professional development of academics, providing mutual support and the opportunity to reflect upon their experiences with the blended format. Martin (2003) stresses that those lecturers who create blended learning programmes need pedagogical and technological professional development. Some guidelines for professional development are (1) focusing on the proper use of educational technologies (Schneider, 2010); (2) providing experiences with online programme work from a student perspective (Piper, 2010); (3) guiding lecturers to understand which classes are best suited for a blended option (Garrison & Kanuka, 2004; Picciano, 2006), and (4) exposing lecturers to prototype projects that have proven successful (Garrison & Kanuka, 2004).

Along with developing the infrastructure and internal guidelines for a blended learning strategy, providing incentives for adoption by lecturers and administrative staff has been shown to increase the chances of successful implementation. Such incentives could include financial compensation and release time or equipment (Martin, 2003; Garrison & Kanuka, 2004; Shea, 2007; Watson, 2010).

Martin (2003) emphasises that lecturers perceive online programme preparation and delivery time to be greater than that of traditional programmes. Therefore, institutions should re-

evaluate the weight of blended programmes compared to those taught traditionally in the classroom. In addition, broader incentives that add to the success of a blended learning strategy include funding allocations for blended learning development (Garrison & Kanuka, 2004; Watson, 2010). Garrison and Kanuka (2004) suggest that an innovation fund be created to provide financial support and incentives to lecturers and departments that initiate blended learning programme transformations.

6.2.5 Evidence of advantages of a blended learning mode

Among the advantages frequently cited for blended learning, is the fact that students in these programmes perform better than their counterparts in fully online or face-to-face programmes (Means et al., 2010). Student satisfaction also tends to be higher in blended programmes when compared to traditional lecturing programmes (Martínez-Caro & Campuzano-Bolarín, 2011). A further advantage is that institutions are able to increase their enrolment without the need for new construction, because classroom space can be better utilised (Dziuban et al., 2011).

However, a number of prerequisites need to be in place for these advantages to materialise. Technological infrastructure and institutional policies influence the implementation of blended learning at higher education institutions (Graham et al., 2013). Clear policy direction must be in place to establish the necessary physical and technological infrastructure such as computers, internet access and required software (Powell, 2011).

Systematic evaluation of satisfaction with new blended programmes in terms of the teaching, learning, technology and administration is important to any blended learning implementation (Garrison & Kanuka, 2004; Sharpe et al., 2006). Also, the importance of sharing the evaluation results with other stakeholders, for example the issues around communication and timeous feedback as critical success factors (Graham et al., 2013), should not be underestimated. Lastly, broader issues such as authority, social justice, social responsibility, relevance and commitment cannot be separated from programme renewal (Jansen, 2009; Du Toit, 2011).

6.2.6 Interaction as the way to engagement

The interactivity of the blended mode of learning was deemed important and effective in providing reinforcement with most students utilising the interactivity tools. An online virtual presence enhances the interaction among lecturers and students; this could include, for example, relevant, useful and practical case studies or online activities to ensure that students interact with the learning material. Barriers to interaction and feedback can be overcome by emphasising trust and supportive partnerships, as well as ensuring that students are awarded credit for their activities by linking collaboration to other activities such as online discussion forums.

Blended learning is by nature interactive and self-paced. Interactivity, which enables students to engage with the learning material, is a reported benefit of blended learning material. The online discussion forums provided interaction; the online activities were mostly relevant, useful and practical although a few students did mention that they would prefer more multimedia videos to stimulate their own learning and for application in their classrooms. External links were helpful, although the internet access was a barrier. Hence, a few links were inaccessible. Also, some learning material and posts were too extensive and some students mentioned that the amount of reading material they were expected to read within a limited time period was challenging.

A number of students felt that blended learning falls short on student engagement. This could be attributed to a lack of sufficient interaction between the lecturer and the students on discussion forums, a lack of online presence of lecturers and the need for more timely and constructive feedback. Lack of student satisfaction might be due to the non-personal nature of the online environment and the high volume of requests that the lecturer needs to respond to daily. Students may not be comfortable with asking questions online and or participating in the online discussions. One lecturer highlighted the fact that the BEd Hons students are on a postgraduate level and that, having completed a degree, communication should not be problematic. In this regard Jones and Chen (2008:22) warned that "instructors should consider whether the pedagogical benefits of requiring discussion board participation exceed the costs" and to what extent students' conceptual understanding could be enhanced if they participate online.

6.2.7 Obstacles to learning and development in a blended learning context

The study's findings point to the following factors being the most important obstacles to effective blended learning implementation and student satisfaction: a lack of academic support, especially supervision of the research projects due to the process being labour intensive; insufficient online presence of lecturers; inadequate technological infrastructure for rural students with limited computer and internet access and outdated software that led to them missing out on important online notifications. This points to the significance of specific factors to be able to present a successful blended learning programme, such as updated software, access to hardware, bigger bandwidth, better connectivity as well as personal skills and attributes, including adequate computer literacy and skills, confidence in using computers and a positive attitude and openness to change. Despite the admission requirements of the programme, stipulating that students should have access to the internet, not all students actually had access to the internet after hours and some were sharing computers. All these factors have to be considered when planning online activities for the students.

These obstacles could not only be demoralising for students, but could also entail unnecessary costs to students. Hence, blended learning programme designers need to carefully consider a host of technical issues during the first phase of programme development, such as dependence on internet access, the size of the programme which should not be too demanding on computer memory, the platform being easy to be navigated, material should not require software on the students' computers that is not easily available and the design must be interactive to engage students. Online platform restrictions should be considered in updated versions of programmes, also addressing internet access, data usage and costs and limiting the number of external links, or making these links non-compulsory.

6.3 LIMITATIONS OF THE STUDY

Certain choices could have possibly influenced the results of the study. These include the following:

6.3.1 *Limited scope of the study*

The study focused on Honours students in the Faculty of Education, at Stellenbosch University. The use of students at one HEI, within one faculty and only focusing on postgraduate students, means that the results cannot be generalised to the student population of Stellenbosch University or the South African student population as a whole. Furthermore, the main problem with a small study with a relatively small number of responses is the interpretation of results, where a larger study can produce results with a greater probability of statistical significance. Another limitation of small studies is that they can produce false-positive results, or they can over-estimate the scale of an association. However, the study was interested in identifying the level of student satisfaction with the first year of implementation of the new BEd Hons programmes in order to make recommendations for further refinement and enhancement of the programmes. In spite of the limitations, the study did reach this primary research goal.

6.3.2 *Limited timespan for data collection*

Due to students not being on campus, it was difficult for the researcher to approach the target population to introduce the study and to give them context before they received the survey online. Furthermore, the survey was sent out during a four-week period, just before the students started preparing for their exams. The limited timespan influenced the results of the study and the ideal would have been to extend the survey period.

6.3.3 Data collection instrument

The online survey used a self-designed, self-administrated instrument and Checkbox software, known as SUNSurvey. Working with this software at the start was quite time-consuming. Moreover, to design an effective and professional survey tool that is adaptable to all three technology devices (laptop, iPad and cell phones) was a frustration. Furthermore, to keep in mind the younger generation participants who prefer concise text and more interactive visuals, was a challenge. In addition, in the interest of brevity, the questionnaire only focused on the core elements of student satisfaction. The researcher could have asked more questions relating to ICT skills, level of technological experience and students' available ICT resources to be able to compare students' circumstances with various challenges relating to digital literacy. The ideal would have been to add a second data gathering phase with focus groups for a more in-depth understanding of students' satisfaction levels with blended learning.

To conclude, a survey increases the degree of anonymity, it is easier to conduct and to administer than interviews. The challenge lies with a good instrument design that is neither too long nor too short, that have clear questions and that would yield reliable and consistent results.

6.3.4 Lack of demographic data

Demographic data was limited since the researcher wanted to keep the study a low-risk study. As a result of that, the study lacked descriptive statistics of the sample group. Students' live-in or working conditions, work experiences, distance from the SU campus, language or age group could have highlighted different challenges in a technology-rich or -poor environment. For that reason, applying qualitative data collection such as focus groups could be beneficial for future studies to understand the complexity of students' satisfaction with blended learning within a specific setting.

Based on the limitations discussed in this section, the strengths and recommendations are stated in the next sections.

6.4 STRENGTHS AND BENEFITS OF THE STUDY

6.4.1 *A novel study*

The study was the first of its kind to evaluate student satisfaction with the new BEd Hons programmes at the SU FOE, incorporating a blended learning approach as part of the institution's strategic goals to increase postgraduate student success and aim for excellence. The ultimate goal was to identify implementation factors which could be addressed to promote student satisfaction and quality learning.

6.4.2 *Scope of the study*

Whereas the limited scope of the study could, on the one hand, be seen as a limitation, this was at the same time one of its strengths. Being a small-scale student satisfaction study, it was possible to conduct the research shortly after the first year of implementation had been concluded. Therefore, the strength was that the research question could be addressed in a relatively short space of time. This means that the results of the investigation could be utilised to improve the programmes concerned in the near future.

6.4.3 *Lecturers thinking critically about their own practices*

Lecturers agreed that they were required to think differently about teaching and learning in the context of programme renewal due to the blended learning approach. One lecturer noted greater awareness of the possibilities and potential offered by blended learning, which holds promise even at the undergraduate level. I believe that the research process, more specifically the interviews, led lecturers to think critically about the approaches necessary to ease the transition to a new curriculum and learning model, particularly to enhance student participation and the online presence of teaching staff. For the lecturers to effectively design a module, they will need to invest in pedagogical principles on how to encourage students to engage. In this way the research project itself served as a stimulus for reflection by lecturers on their own practices in these programmes.

6.4.4 Sequential explanatory evaluation design

The type of research design chosen for this study, namely sequential explanatory evaluation, allowed the researcher to delve deeper by collecting data, using a survey first and conducting follow-up qualitative interviews thereafter. Thus, the researcher was able to get a view of the breadth of the problem as well as some depth of understanding of the problem. In this case, the researcher generated the 'numbers', and then the 'words' were collected to explain the numbers. Besides the mixed method research that generated valuable data, triangulation added richness from interviews, the survey and the reviewing of documents. The interviews created the opportunity (filled the survey gap) for direct feedback and clarifications, and for probing complex answers by allowing the respondents, the specialists in the field, to share their rich, in-depth knowledge and experience.

6.5 IMPLICATIONS AND RECOMMENDATIONS

6.5.1 Implications for management – The price tag of blended learning

A critical issue not addressed sufficiently in this study or in literature is the cost of blended learning (infrastructure, software, professional development, time, incentives, etc.) and the extent to which students are willing to pay for a blended experience. Swingler (2018) highlights the concern that the students who will benefit from a blended mode are only privileged wealthy students with the necessary technological gadgets and resources. Taplin, Kerr and Brown (cited in Owston, 2013) tackle one dimension of the costing of blended learning by analysing the monetary value that students place on being able to download recorded class lectures such as telematic broadcasts or iLectures. Although their study quantifies what students are willing to pay, Taplin and co-authors do not necessarily endorse the charging of a fee for lecture recordings, but they point out that their study does provide evidence of the value students place on blended learning. A further set of questions arises when examining the monetary value students place on blended learning, as some HEIs levy a technology fee from students to cover the additional costs of blended learning. Alternatively, there is also a need to analyse cost avoidance by not having to construct additional classrooms, due to blended learning, thus providing for increased enrolments (Dziuban et al., 2011). Furthermore, differences in quality assurance and efficiency make it difficult to assign a value to the implementation of blended learning models. Battaglino, Haldeman and Laurans

(2012) measured the differences between the cost of academic and administrative staff, programme content, technology, academic operations, student services and researchers of blended learning versus improving on utilising the traditional model. According to the study of Battaglino et al. (2012), the traditional teaching model may actually spend substantially more per student than utilising blended learning models.

6.5.2 Implications for practice - Orientation

The study shows that much value can be added to the BEd Hons programmes if the programme during the orientation week is revised to put more emphasis on the expectations of a blended learning mode and on the uniqueness of the online platform during contact sessions and workshops. The sessions could put a stronger focus on the introduction of the online platform, all the possibilities to interact and improve the individual's experience for maximum output, explain the concept of blended learning and the use of multimedia and how effectively to use SUNLearn-specific tools.

6.5.3 Implications for practice – Revisit 'at-risk' student support

Both literature and this study suggest that 'at-risk' students may not be able to cope with the blended environment as well as their high achieving peers. Therefore, HEIs may want to consider providing 'at-risk' students with stronger academic support for blended programmes, such as an allocated mentor or tutor. In addition, several academics requested that the admission criteria for the programme be changed by adding a requirement that students should at least have two years formal teaching experience, due to the challenge to interact with pedagogical content and research related problems.

Although blended learning creates flexibility and allows students to pursue their studies any time anywhere, it should not exclude traditional face-to-face teaching completely, as students struggle when they do not receive timeous feedback, ask questions that are not answered immediately and experience a lack of guidance. The downside of blended learning is that enquiries may be more time-consuming to resolve by e-mail, compared to addressing a group

of students in a traditional classroom situation. One lecturer did mention that she spends more time responding to individual e-mails than when teaching a traditional programme.

6.5.4 Implications for practice – Use a standardised, straightforward and a user-friendlier online platform

To allow for an even more interactive online interface, the online platform should be more flexible, such as modifying the design for the specific target market in order to ease navigation by investing in a simpler professional design and a graphical presentation of the content to facilitate learning. The online platform should also take into account the unique situation and constraints of students from rural areas, viz. low bandwidth, poor connectivity and free software. In addition, various applications for interactivity in the modules could be created to ensure interaction or engagement of the student with study material - such as online quizzes, links to further information or websites, relevant pictures and video clips, as well as context-specific case studies and additional learning tools for educators to apply at their schools. Standardisation of the module layout design would make the navigation less time-consuming for students, and aspects that could be improved range from icons, menu tabs and even colour scheme. Standardising the way that the aims, objectives and the outcomes of modules are presented, as well as a master calendar which will include all the deadlines and important notifications, will also be helpful. Further suggestions were to include more (and improved) interactive quizzes and online activities such as audio and video material, and converting all document links to PDF-format which would make the material more user-friendly and would enable printing of case studies. The online module layout could be peer-reviewed to ensure consistency and standardisation among all the module layouts by allowing experts to evaluate the module according to specific criteria (correctness/relevance, interactivity, and usefulness, latest information, level of presentation and user-friendliness).

6.5.5 *Implications for future research*

Some suggestions for future research include the following:

- a comparative study where scholars look into the strengths and weaknesses of different ICT and blended learning tools for optimal learning at the postgraduate level;
- a comparative study to investigate whether there are differences in student satisfaction between public HEIs and private HEIs, between undergraduate versus postgraduate students, and/or between the other nine faculties at Stellenbosch University on all five campuses with a blended learning approach;
- exploring the motives behind the levels of satisfaction to facilitate improvement in the quality of blended learning programmes offered (research should help to understand the needs of the students, to support the lecturers and to promote the overall success of blended learning at Stellenbosch University);
- focussing on whether there are different strategies for working with academics, as opposed to academic administrators during the implementation of a blended learning approach to effectively facilitate alignment with these two groups;
- the issue that the academic's ability is a critical factor in determining the success of students in the blended environment, as raised by Owston, Garrison and Cook (2006). Assuming that is the case, research is needed to find out what kinds of support and services low achieving students require in order to succeed in blended environments. The question can be asked whether these kinds of support and services are different from the typical tutorial assistance provided in many university programmes.

6.6 SUMMARY

In the present study, overall satisfaction levels among postgraduate students suggest that blended learning may be a desirable solution to address the growing national and international demands in higher education. It is important to develop commitment at institutional and national level for support of blended learning via the development of policies, resource allocation and by putting in place the required security and safety measures. For the optimal implementation of blended learning approaches, students and academic staff must be confident with their digital literacy skills. Therefore the online platform should be user-friendly and easy to navigate, with early and effective training provided. A clear outline of the digital competencies and expectations of online communication is fundamental in assisting students who are not confident in using technologies. Further investment in intensive training on blended learning and its affordances is required.

Importantly, technology should not replace the traditional classroom completely, but a balanced blend of both could support optimal learning. In this study, postgraduate students chose these web-based programmes due to their convenience and flexibility. Students, however, indicated that there is room for improvement in the technology used. The FOE should ensure that they have sufficient assistance available for troubleshooting to reduce frustration among students. Indeed, students are more likely to achieve learning outcomes if they react positively and enjoy the learning experience. Students who rate their own ICT skills as high were more likely to report that they have learnt something and have found the content adequate, and to recommend the programme to others. Should students' digital skills not meet the requirements for the programme, they may perceive the programme as not useful for their learning, thus being dissatisfied with blended learning as the mode of teaching.

In summary, investment in the following key areas may further promote a successful, sustainable blended learning programme:

- information technology training, accessibility and assistance
- development of effective blended learning material
- contextualisation and flexibility of online learning materials

- ongoing professional development among students and academic staff
- defining the rights, roles and responsibilities of students and academic staff
- measuring and monitoring of programme quality, success and outcomes based on standardised metrics.

6.7 CONCLUSION

Student satisfaction with blended learning is important because it can impact motivation and, therefore, student success and completion rates. Measurement of satisfaction is also valuable to HEIs because the results can be used to evaluate the programme. This study offers important and suitable evidence on blended learning, as this type of delivery method grows in popularity. The traditional in-class delivery will still be seen as the ‘superior’ choice, but the blended learning opportunity offers an attractive alternative and, in some areas, may even score higher levels of student satisfaction and effectiveness. From the results, it is clear that the on-campus and off-campus experience of students with formal and informal learning and teaching have a significant positive relation to student satisfaction. Thus, it confirms what other studies have found, namely that improving quality may potentially improve student satisfaction. It is important to verify in this regard that, from the descriptive analysis, three factors (academic support, face-to-face versus telematics, feedback) are the most critical factors in explaining student satisfaction. Therefore, it would be important to create an infrastructure with further opportunities for continuous and sustainable student support, and to ensure that students have regular access to technical and academic support in order to effectively engage with the blended learning environment.

To conclude, the key criteria for the blended learning approach has been met during the implementation phase of the three BEd Hons programmes, viz. (1) enable the university to respond to pressure to increase enrolment; (2) provide a better learning experience for students; (3) increase student engagement; and (4) improve student learning.

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ADDENDUM A: THE STUDENT SATISFACTION QUESTIONNAIRE



Page 1

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SURVEY

Student satisfaction with a blended learning approach of Hons programmes

SECTION 1

Please complete the following anonymous evaluation of BEd Hons *blended learning** programmes of 2017.

**blended learning is the combination of face-to-face and online teaching such as telematics broadcasts*

1.1 What BEd Hons programme are/were you registered for?

- ☐ Education Development and Democracy
- ☐ Educational Support
- ☐ Language Education

1.2 Did you enrol?

- ☐ Full-time (duration 1 year)
- ☐ Part-time (duration 2 years)

Page 2

SECTION 2

Please read the following statements and indicate to what extent you agree or disagree on the 4-Point Likert scale - Strongly disagree (1) to strongly agree (4):

2. PROGRAMME AND MODULE MATERIAL (QUALITY)

2.1 The programme description accurately reflected the content of the programme.

- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

2.2 The textbook and/or required readings were an asset to this programme.

- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

2.3 The programme and module material stimulated my interest in this field of education.

- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

2.4 Given the programme level, the quantity of work required was reasonable.

- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

2.5 Overall, I was satisfied with the module material (e.g. study guide, support documents and supplementary reading, and other activities).

- | | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

Page 3

3. SUPPORT**3.1 Academic support (e.g. tutoring, consultations) was accessible when I needed it (tutor-to-student).**

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☒ 3 ☐ 4

3.2 The lecturers guided and supported me appropriately

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

3.3 The lecturers regularly participated in online discussions forums.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

3.4 The tutors regularly participated in online discussions forums.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

3.5 The online resources were clear and easy to understand.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

Page 4

4. INTERACTION**4.1 Blended learning enabled me to have regular online contact with the tutor.**

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

4.2 Discussion forums provided an online platform for me to engage with other students.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

4.3 Blended learning enabled me to share knowledge with other students.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

4.4 Blended learning provided an up-to-date electronic two-way communication channel between students and tutors.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

4.5 I found it easy to participate in online discussion forums (student-to-student).

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

Page 5

5. PROGRAMME CONTENT**5.1 The learning materials (lecture notes, reading lists, PDFs, PowerPoint presentations and online activities) provided in the programme were directly relevant to me as a student.**

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

5.2 The learning materials provided in the programme were appropriate for a honours programme.

Strongly disagree Disagree Agree Strongly agree

☐ 1 ☐ 2 ☐ 3 ☐ 4

5.3 The programme content was clearly communicated to me.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

5.4 Learning materials provided on the online platform allowed me to develop critical thinking skills.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

5.5 A blended approach made it easy for me to choose what materials will help me to learn.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

Page 6

6. INTERFACE

6.1 SUNLearn enabled me to gain easy access to up-to-date learning materials (e.g. study resources and manuals).

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

6.2 Telematics broadcasts were an effective learning tool guiding me through the course.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

6.3 The design, layout and format of the online platform were easy to use.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

6.4 I could easily access my SUNLearn modules anywhere and at convenient times which suited my schedule.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

6.5 It was easy to upload assignments using the online interface.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

6.6 The technology used for blended learning was reliable and consistent.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

6.7 The SUNLearn platform facilitated the development of competency in online technologies.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

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7. ASSESSMENT

7.1 The module assessments in this programme were aligned with the learning outcomes.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

7.2 Formative assessments helped me to reach the learning outcomes of the module.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

7.3 Clear guidelines were provided for completion of online assessment tasks.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

7.4 Reading assignments were of reasonable length and level.

Strongly disagree Disagree Agree Strongly agree
☐ 1 ☐ 2 ☐ 3 ☐ 4

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8. APPLICATION: THEORY AND PRACTICE**8.1 The learning material used in my programme effectively linked theory to practice.**

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

8.2 Theory learned was easy to translate into a real-world practical application.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

8.3 Design of the online platform facilitated problem-solving skills essential to knowledge application.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

Page 9

9. FEEDBACK**9.1 The lecturers provided constructive feedback following completion of assessments.**

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

9.2 An online blended learning approach helped me to master the learning material at my own pace.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

9.3 Online learning helped me with my time management.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

Page 10

10. FACE-TO-FACE VS. TELEMATICS**10.1 I attended the telematic sessions.**

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Not at all | Occasionally | Regularly | All of them |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

10.2 I preferred telematics sessions to face-to-face teaching and learning approaches.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

10.3 My experience of telematics learning was similar to that of face-to-face contact.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

10.4 Telematics sessions contributed to my positive experience of the programme.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

10.5 If I had a choice, I would prefer attending more face-to-face contact sessions with my lecturers.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

Page 11

11. SATISFACTION

11.1 I was satisfied with blended learning as an approach for interacting with the lecturer off-campus.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Very dissatisfied | Dissatisfied | Satisfied | Very satisfied |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

11.2 I was satisfied with the online accessibility and availability of the lecturer.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Very dissatisfied | Dissatisfied | Satisfied | Very satisfied |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

11.3 I was satisfied with the quality of interaction with tutors.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Very dissatisfied | Dissatisfied | Satisfied | Very satisfied |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

11.4 I was satisfied with the online platform to facilitate interaction with other students.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Very dissatisfied | Dissatisfied | Satisfied | Very satisfied |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

Page 12

SECTION 3

Please answer the following questions related to your overall experience:

12.1 I would recommend this programme to another student.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

12.2 Overall, I was satisfied with the programme.

| | | | |
|-------------------------|-------------------------|-------------------------|-------------------------|
| Strongly disagree | Disagree | Agree | Strongly agree |
| <input type="radio"/> 1 | <input type="radio"/> 2 | <input type="radio"/> 3 | <input type="radio"/> 4 |

12.3 What has been most satisfying about your blended learning experience so far as part of the BEd Hons programme?

What were the best aspects of this programme?

12.4 What has been the most challenging about your blended learning experience as part of the BEd Hons programme?

Which changes would enhance your satisfaction?

12.5 Please provide any additional comments below

ADDENDUM B: CONSENT TO PARTICIPATE FOR STUDENTS



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jou kennisvennoot • your knowledge partner

CONSENT TO PARTICIPATE IN RESEARCH

You are invited to take part in a study conducted by Jeanette Barry, from the Faculty of Education at Stellenbosch University. The research model will be tested using a 4-point Likert scale questionnaire survey of 109 enrolled BEd Hons students. You were approached as a registered BEd Honours student.

The Faculty of Education took a decision in 2013 to invest in blended learning, in the redesign of the new BEd Hons programmes, for a number of reasons including (1) To rationalise time of staff and students; (2) Exploitation of new markets, by providing for working educationists' needs for further study with greater flexibility; (3) Creating an innovative learning environment to stimulate and enhance student engagement and improve learning outcomes.

1. PURPOSE OF THE STUDY

The dual purpose of the research is to further improve and refine programmes and submit a Master's thesis.

The primary aim of this study is to determine student satisfaction with a blended learning approach at Stellenbosch University. Student satisfaction can be linked to student success, course quality, retention and persistence. The main factors of this model include computer self-efficacy, performance expectations, system functionality, technology quality, content features, interaction (community learning) and learning climate. Measuring student satisfaction can help identify factors that may need improvement in order to achieve enhanced student learning.

2. WHAT WILL BE ASKED OF ME?

If you agree to take part in this study, you will be asked to evaluate the implementation process with questions such as 'What did you find satisfying about the BEd Hons in 2017', 'What will you change in 2018?', 'What did you learn from lecturers and peers during the 2017 implementation?', 'What worked very well?' and to rate your overall experience. The questionnaire will take approximately 15-minutes to complete and will contain a combination of questions covering learning design, a learning community and learning material. You will need to rank each question with a level of satisfaction (4-point Likert scale, where 1 = very dissatisfied and 4 = very satisfied or 1 = strongly disagree until 4 = strongly agree.

A new term that will be mentioned in the survey is '*blended learning*'. Researchers in the educational technology field broadly define blended learning as a multi-layered hybrid between traditional face-to-face and fully online course offerings, where the best features of face-to-face are combined with technology, and where the campus experience is enhanced through innovative communication technology. *Blended learning* can create alternative learning opportunities to make education more accessible, improve productivity in teaching, and, most importantly, enrich learning experiences.

Written consent template. REC: Humanities (Stellenbosch University) 2017

3. POSSIBLE RISKS AND DISCOMFORTS

This study is regarded as low-risk. Surveys will be done online that are neither physically invasive nor time-consuming. The survey was designed to be completed on all three devices (PC, tablet and mobile) for your convenience. All participants are either honours students or faculty, so they are accustomed to various processes of evaluation. To minimise the risks, the data will be mostly collected anonymously as per consent form and will be seen as non-sensitive because I shall be gathering opinions rather than personal information. All voluntary participants are adults, thus they are not seen as a vulnerable research population. Participants who decide not to participate will not be disadvantaged in any way.

4. POSSIBLE BENEFITS TO PARTICIPANTS AND/OR TO THE SOCIETY

The findings from this survey could help identify factors that may need improvement, build on, further strengthen these strong points but also to address and improve in order to achieve effective student learning in the new blended learning BEd Hons programmes.

5. PAYMENT FOR PARTICIPATION

No payment, only on a voluntary basis by sharing your time, invests in the future to improve student success, refine SU programmes within the blended learning environment.

6. PROTECTION OF YOUR INFORMATION, CONFIDENTIALITY AND IDENTITY

Any information you share with me during this study and that could possibly identify you as a participant will be protected. This will be done by not linking respondents directly to the data; it will be maintained by assigning anonymous subject numbers (codes) to ensure the security of data and anonymity. All correspondence relating to results will be kept under password protection. Data will be backed up weekly and stored in an external memory in a locked cabinet at the Centre for Higher and Adult Education. Data collection, feedback and results will be handled sensitively not to offend primary role players (programme coordinators and programme developers) in the evaluation process. The results will not be made public and no identifiable information of participants will be made public.

All participants are either honours students or faculty, so they are accustomed to various processes of evaluation. To minimise the risks, the data will be mostly collected anonymously as per consent form and will be seen as non-sensitive because I shall be gathering opinions rather than personal information. All voluntary participants are adults, thus they are not seen as a vulnerable research population. Participants who decide not to participate will not be disadvantaged in any way.

7. PARTICIPATION AND WITHDRAWAL

You can choose whether to be in this study or not. If you agree to take part in this study, you may withdraw at any time without any consequence. You may also refuse to answer any questions you do not want to answer and still remain in the study.

8. RESEARCHERS' CONTACT INFORMATION

If you have any questions or concerns about this study, please feel free to contact the researcher, Jeanette Barry at jeanettebarry00@gmail.com or 072 5646 354, and/or the supervisor, Prof Magda Fourie-Malherbe at mfourie@sun.ac.za.

9. RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research participant, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

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Written consent template. REC: Humanities (Stellenbosch University) 2017

ADDENDUM C: THE FACILITATORS INTERVIEW PROTOCOL



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INTERVIEW PROTOCOL FOR AN INDIVIDUAL INTERVIEW

- *Do you give permission for this interview to be recorded?*
 - *Could you please state the programme you were involved with, as well as the capacity in which you were involved in the programme?*
-
- 1) In your opinion, what worked well during the first year of implementation of the programme? What were the strengths of the programme?
 - 2) What did not work well? What weaknesses were you aware of?
 - 3) How, do you think, could the programme(s) be improved?
 - 4) What, in your opinion, was the level of satisfaction among BEd Hons students with the programme?
 - 5) What, do you think, led to their satisfaction/dissatisfaction?
 - 6) How, do you think, could their level of satisfaction be improved?
 - 7) According to the survey results, students had lower levels of satisfaction with assessment and with feedback. Would you like to comment on this?
 - 8) How would you rate your level of satisfaction with your involvement with the programme?
 - 9) Any other comments?

Thank you for your time and for sharing your perspectives!

ADDENDUM D: CONSENT TO PARTICIPATE FOR FACILITATORS



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CONSENT TO PARTICIPATE IN RESEARCH

You are invited to take part in a study conducted by Jeanette Barry from the Faculty of Education at Stellenbosch University. The topic of the study is: *Student satisfaction with a blended learning approach: implementation evaluation of three Honours programmes in Education*. The research proposal was approved by the MPhil proposals committee of the Centre for Higher and Adult Education in the Department of Curriculum Studies. Ethical clearance for the study was granted by the SU Research Ethics Committee (Humaniora) and institutional permission was granted by the Division for Institutional Research and Planning.

You are approached to participate in the study in your capacity as programme coordinator/lecturer/tutor/professional or administrative staff member involved with the implementation of the BEd Hons (Educational Support), BEd Hons (Educational Development and Democracy) and BEd Hons (Language Education).

1. PURPOSE OF THE STUDY

The purpose of the research is:

- to identify the level of student satisfaction with the first year of implementation of the new BEd Hons
- programmes in order to make recommendations for further refinement and enhancement of the programmes;
- to report to the Vice-rector: Learning and Teaching on the first year of implementation, and
- to contribute towards the completion of a master's thesis for the MPhil (Higher Education) degree.

The primary aim of this study is to determine student satisfaction with a blended learning approach in three BEd Hons programmes at Stellenbosch University.

2. WHAT WILL BE REQUIRED?

If you agree to take part in this study, you will be asked to make yourself available for an individual interview with the purpose to elicit your perspectives on the first year of implementation (2017) of three new BEd Hons programmes in a blended learning mode. The interview will take approximately 30-minutes and will be conducted in your office. Your permission will be sought to record the interview, after which it will be transcribed.

Written consent template. REC: Humanities (Stellenbosch University) 2017

3. POSSIBLE RISKS AND DISCOMFORTS

This study is regarded as low-risk. All voluntary participants are adults; thus, they are not seen as a vulnerable research population. Participants who decide not to participate will not be disadvantaged in any way.

4. POSSIBLE BENEFITS TO PARTICIPANTS AND/OR TO THE SOCIETY

The findings from this survey could help identify factors that may need improvement, build on, further strengthen these strong points but also to address and improve in order to achieve effective student learning in the new blended learning BEd Hons programmes.

5. PROTECTION OF YOUR INFORMATION, CONFIDENTIALITY AND IDENTITY

Any information shared during this study and that could possibly identify you as a participant will be protected. This will be done by not linking respondents directly to the data; it will be maintained by assigning anonymous subject numbers (codes) to ensure the security of data and anonymity. All correspondence relating to results will be kept under password protection. Data will be backed up weekly and stored in an external memory in a locked cabinet at the Centre for Higher and Adult Education. Data collection, feedback and results will be handled sensitively not to offend primary role players (programme coordinators and programme developers) in the evaluation process. No identifiable information of participants will be made public.

6. PARTICIPATION AND WITHDRAWAL

You can choose whether to participate in this study or not. If you agree to take part in this study, you may withdraw at any time without any consequence. You may also refuse to answer any questions you do not want to answer and still remain in the study.

7. RESEARCHERS' CONTACT INFORMATION

If you have any questions or concerns about this study, please feel free to contact the researcher, Jeanette Barry at jeanettebarry00@gmail.com or 072 5646 354, and/or the supervisor, Prof Magda Fourie-Malherbe at mfourie@sun.ac.za.

8. RIGHTS OF RESEARCH PARTICIPANTS

You may withdraw your consent at any time and discontinue participation without penalty. You are not waiving any legal claims, rights or remedies because of your participation in this research study. If you have questions regarding your rights as a research participant, contact Ms Maléne Fouché [mfouche@sun.ac.za; 021 808 4622] at the Division for Research Development.

Written consent template. REC: Humanities (Stellenbosch University) 2017

DECLARATION OF CONSENT BY THE PARTICIPANT

As the participant I confirm that:

- I have read the above information and it is written in a language that I am comfortable with.
- I have had a chance to ask questions and all my questions have been answered.
- All issues related to privacy, and the confidentiality and use of the information I provide, have been explained.

Signature of Participant

.....
Date

| | | | |
|---|--|--------------------------|--------------------------|
| I confirm that I have read and understood the information provided for the current study. | | YES | NO |
| | | <input type="checkbox"/> | <input type="checkbox"/> |
| I agree to take part in this survey. | | YES | NO |
| | | <input type="checkbox"/> | <input type="checkbox"/> |

| |
|---|
| <p>DECLARATION BY THE PRINCIPAL INVESTIGATOR</p> |
|---|

As the **principal investigator**, I hereby declare that the information contained in this document has been thoroughly explained to the participant. I also declare that the participant has been encouraged (and has been given ample time) to ask any questions. In addition, I would like to select the following option:

| | |
|--|--|
| | The conversation with the participant was conducted in a language in which the participant is fluent. |
| | The conversation with the participant was conducted with the assistance of a translator (who has signed a non-disclosure agreement), and this “Consent Form” is available to the participant in a language in which the participant is fluent. |

Signature of Principal Investigator

Date

Written consent template. REC: Humanities (Stellenbosch University) 2017

ADDENDUM E: INSTITUTIONAL PERMISSION

**INSTITUTIONAL PERMISSION:
AGREEMENT ON USE OF PERSONAL INFORMATION IN RESEARCH**

Name of Researcher: Jeanette Barry
 Name of Research Project: Student satisfaction with a blended learning approach: implementation evaluation of three Honours programmes in Education
 Service Desk ID: IRPSD 738
 Date of Issue: 1 December 2017

You have received institutional permission to proceed with this project as stipulated in the institutional permission application and within the conditions set out in this agreement.

| 1 WHAT THIS AGREEMENT IS ABOUT | |
|--|---|
| What is POPI? | POPI is the Protection of Personal Information Act 4 of 2013. POPI regulates the entire information life cycle from collection, through use and storage and even the destruction of personal information. |
| Why is this important to us? | Even though POPI is important, it is not the primary motivation for this agreement. The privacy of our students and employees are important to us. We want to ensure that no research project poses any risks to their privacy. However, you are required to familiarise yourself with, and comply with POPI in its entirety. |
| What is considered to be personal information? | <p>'Personal information' means information relating to an identifiable, living, individual or company, including, but not limited to:</p> <p>1.5.1 information relating to the race, gender, sex, pregnancy, marital status, national, ethnic or social origin, colour, sexual orientation, age, physical or mental health, well-being, disability, religion, conscience, belief, culture, language and birth of the person;</p> <p>1.5.2 information relating to the education or the medical, financial, criminal or employment history of the person;</p> |

Institutional Permission Standard Agreement: 13 March 2017 V1

| | |
|--|---|
| | <p>1.5.3 any identifying number, symbol, e-mail address, physical address, telephone number, location information, online identifier or other particular assignment to the person;</p> <p>1.5.4 the biometric information of the person;</p> <p>1.5.5 the personal opinions, views or preferences of the person;</p> <p>1.5.6 correspondence sent by the person that is implicitly or explicitly of a private or confidential nature or further correspondence that would reveal the contents of the original correspondence;</p> <p>1.5.7 the views or opinions of another individual about the person; and</p> <p>1.5.8 the name of the person if it appears with other personal information relating to the person or if the disclosure of the name itself would reveal information about the person.</p> |
| Some personal information is more sensitive. | <p>Some personal information is considered to be sensitive either because:</p> <p>1.6.1 POPI has classified it as sensitive;</p> <p>1.6.2 if the information is disclosed it can be used to defraud someone; or</p> <p>1.6.3 the disclosure of the information will be embarrassing for the research subject.</p> <p>The following personal information is considered particularly sensitive:</p> <p>1.7.1 Religious or philosophical beliefs;</p> <p>1.7.2 race or ethnic origin;</p> <p>1.7.3 trade union membership;</p> <p>1.7.4 political persuasion;</p> <p>1.7.5 health and health related documentation such as medical scheme documentation;</p> <p>1.7.6 sex life;</p> <p>1.7.7 biometric information;</p> <p>1.7.8 criminal behaviour;</p> <p>1.7.9 personal information of children under the age of 18;</p> <p>1.7.10 financial information such as banking details, details relating to financial</p> |

| | |
|--|--|
| | <p>products such as insurance, pension funds or other investments.</p> <p>You may make use of this type of information, but must take extra care to ensure that you comply with the rest of the rules in this document.</p> |
| 2 COMMITMENT TO ETHICAL AND LEGAL RESEARCH PRACTICES | |
| You must commit to the use of ethical and legal research practices. | You must obtain ethical clearance before commencing with this study. You must commit to only employing ethical and legal research practices. |
| You must protect the privacy of your research subjects. | You undertake to protect the privacy of the research subjects throughout the project. |
| 3 RESEARCH SUBJECT PARTICIPATION | |
| Personal information of identifiable research subjects must not be used without their consent. | Unless you have obtained a specific exemption for your research project, consent must be obtained in writing from the research subject, before their personal information is gathered. |
| Research subjects must be able to withdraw from the research project. | Research subjects must always be able to withdraw from the research project (without any negative consequences) and to insist that you destroy their personal information. |
| Consent must be specific and informed. | <p>Unless you have obtained a specific exemption for your research project, the consent must be specific and informed. Before giving consent, the research subject must be informed in writing of:</p> <p>3.3.1 The purpose of the research,</p> <p>3.3.2 what personal information about them will be collected (particularly sensitive personal information),</p> <p>3.3.3 how the personal information will be collected (if not directly from them),</p> <p>3.3.4 the specific purposes for which the personal information will be used,</p> <p>3.3.5 what participation will entail (i.e. what the research subject will have to do),</p> <p>3.3.6 whether the supply of the personal information is voluntary or mandatory for purposes of the research project,</p> |

| | |
|---|---|
| | <p>3.3.7 who the personal information will be shared with,</p> <p>3.3.8 how the personal information will be published,</p> <p>3.3.9 the risks to participation (if any),</p> <p>3.3.10 their rights to access, correct or object to the use of their personal information,</p> <p>3.3.11 their right to withdraw from the research project, and</p> <p>3.3.12 how these rights can be exercised.</p> |
| Consent must be voluntary. | Participation in the research project must always be voluntary. You must never pressure or coerce research subjects into participating and persons who choose not to participate must not be penalised. |
| Using the personal information of children? | <p>A child is anybody under the age of 18.</p> <p>Unless you have obtained a specific exemption in writing for your research project, you must obtain</p> <p>3.6.1 the consent of the child's parent or guardian, and</p> <p>3.6.2 if the child is over the age of 7, the assent of the child, before collecting the child's information.</p> |
| Research subjects have a right to access. | Research subjects have the right to access their personal information, obtain confirmation of what information is in your possession and who had access to the information. It is strongly recommended that you keep detailed records of access to the information. |
| Research subjects have a right to object. | <p>Research subjects have the right to object to the use of their personal information.</p> <p>Once they have objected, you are not permitted to use the personal information until the dispute has been resolved.</p> |
| 4 COLLECTING PERSONAL INFORMATION | |
| Only collect what is necessary. | You must not collect unnecessary or irrelevant personal information from research subjects. |
| Only collect accurate personal information. | You have an obligation to ensure that the personal information you collect is accurate. Particularly when you are collecting it from a source other than the |

| | |
|--|---|
| | <p>research subject.</p> <p>If you have any reason to doubt the quality of the personal information you must verify or validate the personal information before you use it.</p> |
| 5 USING PERSONAL INFORMATION | |
| Only use the personal information for the purpose for which you collected it. | <p>Only use the personal information for the purpose for which you collected it.</p> <p>If your research project requires you to use the personal information for a materially different purpose than the one communicated to the research subject, you must inform the research subjects and Stellenbosch University of this and give participants the option to withdraw from the research project.</p> |
| Be careful when you share personal information. | <p>Never share personal information with third parties without making sure that they will also follow these rules.</p> <p>Always conclude a non-disclosure agreement with the third parties.</p> <p>Ensure that you transfer the personal information securely.</p> |
| Personal information must be anonymous whenever possible. | <p>If the research subject's identity is not relevant for the aims of the research project, the personal information must not be identifiable. In other words, the personal information must be anonymous (de-identified).</p> |
| Pseudonyms must be used whenever possible. | <p>If the research subject's identity is relevant for the aims of the research project or is required to co-ordinate, for example, interviews, names and other identifiers such as ID or student numbers must be collected and stored separately from the rest of the research data and research publications. In other words, only you must be able to identify the research subject.</p> |
| Publication of research | <p>The identity of your research subjects should not be revealed in any publication.</p> <p>In the event that your research project requires that the identity of your research subjects must be revealed, you must apply for an exemption from this rule.</p> |
| 6 SECURING PERSONAL INFORMATION | |
| You are responsible for the confidentiality and security of the personal information | <p>Information must always be handled in the strictest confidence.</p> <p>You must ensure the integrity and security of the information in your possession or under your control by taking appropriate and reasonable technical and</p> |

| | |
|--|---|
| | <p>organisational measures to prevent:</p> <p>6.2.1 Loss of, damage to or unauthorised destruction of information; and</p> <p>6.2.2 unlawful access to or processing of information.</p> <p>This means that you must take reasonable measures to:</p> <p>6.3.1 Identify all reasonably foreseeable internal and external risks to personal information in your possession or under your control;</p> <p>6.3.2 establish and maintain appropriate safeguards against the risks identified;</p> <p>6.3.3 regularly verify that the safeguards are effectively implemented; and</p> <p>6.3.4 ensure that the safeguards are continually updated in response to new risks or deficiencies in previously implemented safeguards.</p> |
| Sensitive personal information requires extra care. | You will be expected to implement additional controls in order to secure sensitive personal information. |
| Are you sending any personal information overseas? | <p>If you are sending personal information overseas, you have to make sure that:</p> <p>6.5.1 The information will be protected by the laws of that country;</p> <p>6.5.2 the company or institution to who you are sending have agreed to keep the information confidential, secure and to not use it for any other purpose; or</p> <p>6.5.3 get the specific and informed consent of the research subject to send the information to a country which does not have data protection laws.</p> |
| Be careful when you use cloud storage. | <p>Be careful when storing personal information in a cloud. Many clouds are hosted on servers outside of South Africa in countries that do not protect personal information to the same extent as South Africa. The primary example of this is the United States.</p> <p>It is strongly recommended that you use hosting companies who house their servers in South Africa.</p> <p>If this is not possible, you must ensure that the hosting company agrees to protect the personal information to the same extent as South Africa.</p> |
| 7 RETENTION AND DESTRUCTION OF PERSONAL INFORMATION | |
| You are not entitled to retain personal information when | Personal information must not be retained beyond the purpose of the research project, unless you have a legal or other justification for retaining the information. |

| | |
|--|---|
| you no longer need it for the purposes of the research project. | |
| If personal information is retained, you must make sure it remains confidential. | <p>If you do need to retain the personal information, you must assess whether:</p> <p>7.2.1 The records can be de-identified; and/or whether</p> <p>7.2.2 you have to keep all the personal information.</p> <p>You must ensure that the personal information which you retain remains confidential, secure and is only used for the purposes for which it was collected.</p> |
| 8 INFORMATION BREACHPROCEDURE | |
| In the event of an information breach you must notify us immediately. | <p>If there are reasonable grounds to believe that the personal information in your possession or under your control has been accessed by any unauthorised person or has been disclosed, you must notify us immediately.</p> <p>We will notify the research subjects in order to enable them to take measures to contain the impact of the breach.</p> |
| This is the procedure you must follow. | <p>You must follow the following procedure:</p> <p>8.3.1 Contact the Division for Institutional Research and Planning at 021 808 9385 and permission@sun.ac.za;</p> <p>8.3.2 you will then be required to complete the information breach report form which is attached as Annexure A.</p> <p>You are required to inform us of a information breach within 24 hours. Ensure that you have access to the required information.</p> |
| 9 MONITORING | |
| You may be audited. | <p>We reserve the right to audit your research practices to assess whether you are complying with this agreement.</p> <p>You are required to give your full co-operation during the auditing process. We may also request to review:</p> <p>9.3.1 Forms (or other information gathering methods) and notifications to research subjects, as referred to in clause 3;</p> |

| | |
|--|--|
| | <p>9.3.2 non-disclosure agreements with third parties with whom the personal information is being shared, as referred to in clause 5.4;</p> <p>9.3.3 agreements with foreign companies or institutes with whom the personal information is being shared, as referred to in clause 6.5.</p> |
| 10 CHANGES TO RESEARCH | |
| You need to notify us if any aspect of your collection or use of personal information changes. | <p>You must notify us in writing if any aspect of your collection or use of personal information changes (e.g. such as your research methodology, recruitment strategy or the purpose for which you use the research).</p> <p>We may review and require amendments to the proposed changes to ensure compliance with this agreement.</p> <p>The notification must be sent to permission@sun.ac.za.</p> |
| 11 CONSEQUENCES OF BREACH | |
| What are the consequences of breaching this agreement? | <p>If you do not comply with this agreement, we may take disciplinary action or report such a breach to your home institute.</p> <p>You may be found guilty of research misconduct and may be censured in accordance with Stellenbosch University or your home institute's disciplinary code.</p> |
| You may have to compensate us in the event of any legal action. | <p>Non-compliance with this agreement could also lead to claims against Stellenbosch University in terms of POPI and/or other laws.</p> <p>Unless you are employed by or studying at Stellenbosch University, you indemnify Stellenbosch University against any claims (including all legal fees) from research subjects or any regulatory authority which are the result of your research project. You may also be held liable for the harm to our reputation should there be an information breach as a result of your non-compliance with this agreement.</p> |
| 12 CONTACT US | |
| Please contact us if you have any questions. | Should you have any questions relating to this agreement you should contact permission@sun.ac.za . |

Annexure ‘A’

Instruction:

Please send this Notice to permission@sun.ac.za. If you have any difficulty completing the Notice, please contact the Division for Institutional Research and Planning at 021 808 9385. You must confirm that the Notice was received.

NOTIFICATION OF INFORMATION BREACH

Name of Researcher: _____

Name of Research Project: _____

Service Desk ID: _____

A security breach happens when you know (or you **reasonably believe**) that there has been:

- (a) loss of Personal Information (“PI”)
- (b) damage to PI
- (c) unauthorised destruction of PI
- (d) unauthorised access to PI
- (e) unauthorised processing of PI

| | |
|---|--|
| Date and time of security breach: | |
| Brief description of the security breach (what was lost and how). Please identify the equipment, software and/or physical premises and whether it is by hacking, lost device, public disclosure (e-mail), theft or other means: | |
| Name of the person/s responsible for the security breach (if known): | |
| Is the security breach ongoing? | |

| | |
|--|--|
| Describe the steps taken to contain the security breach: | |
| What steps are being taken to investigate the cause of breach? | |

Institutional Permission Standard Agreement: 13 March 2017 V1



ADDENDUM F: RESEARCH ETHICS COMMITTEE APPROVAL

APPROVED WITH STIPULATIONS

REC Humanities New Application Form

26 March 2018

Project number: CUR-2018-1877

Project title: Student satisfaction with a blended learning approach: implementation evaluation of three Honours programmes in Education.

Dear Miss Jeanette Barry

Your REC Humanities New Application Form submitted on 26 March 2018 was reviewed by the REC: Humanities and approved with stipulations.

Ethics approval period:

| Protocol approval date (Humanities) | Protocol expiration date (Humanities) |
|-------------------------------------|---------------------------------------|
| 26 March 2018 | 25 March 2021 |

REC STIPULATIONS:

The researcher may proceed with the envisaged research provided that the following stipulations, relevant to the approval of the project are adhered to or addressed:

The researcher attached correspondence from the SU Division for Information Governance relating to her application for SU permission. She is reminded that she should submit proof of institutional permission from SU once such permission has been obtained. Data collection may only commence once permission is confirmed by the SU Division for Information Governance [ACTION REQUIRED]

HOW TO RESPOND:

Some of these stipulations may require your response. Where a response is required, you must respond to the REC within **six**

(6) months of the date of this letter. Your approval would expire automatically should your response not be received by the REC within 6 months of the date of this letter.

Your response (and all changes requested) must be done directly on the electronic application form on the Infonetica system:<https://applyethics.sun.ac.za/Project/Index/2063>

Where revision to supporting documents is required, please ensure that you replace all outdated documents on your application form with the revised versions. Please respond to the stipulations in a separate cover letter titled “**Response to REC stipulations**” and attach the cover letter in the section **Additional Information and Documents**.

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

If the researcher deviates in any way from the proposal approved by the REC: Humanities, the researcher must notify the REC of these changes.

Please use your SU project number (CUR-2018-1877) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

FOR CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD

Please note that a progress report should be submitted to the Research Ethics Committee: Humanities before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary)

Included Documents:

| Document Type | File Name | Date | Version |
|-----------------------|--|------------|---------|
| Research | 14535602 J Barry MPhil proposal (31 Oct 2017) | 31/10/2017 | 1 |
| Protocol/Proposal | | | |
| Informed Consent Form | 14535602 J Barry SU HUMANITIES Consent template (electronic survey-low risk) | 01/11/2017 | 1 |
| Data collection tool | BEd Hons Facilitators Interview Guide | 10/11/2017 | v2 |
| Data collection tool | BEd Hons Programme evaluation - Google Forms | 10/11/2017 | v2 |
| Proof of permission | IRPSD-738 Institutional permission request | 14/11/2017 | v2 |
| Informed Consent Form | 14535602 J Barry - SU HUMANITIES Consent form (interviews with facilitators) | 22/03/2018 | v2 |
| Informed Consent Form | 14535602 J Barry - SU HUMANITIES Consent form (students) | 22/03/2018 | v2 |
| Data collection tool | 14535602 J Barry Student satisfaction survey (22 March 2018) | 22/03/2018 | v2 |
| Data collection tool | 14535602 J Barry - SU HUMANITIES Consent form (interviews with facilitators) | 22/03/2018 | v2 |
| Data collection tool | 14535602 J Barry - SU HUMANITIES Consent form (students) | 22/03/2018 | v2 |
| Data collection tool | 14535602 J Barry Institutional Permission Standard Agreement IRPSD 738 | 22/03/2018 | v2 |

If you have any questions or need further help, please contact the REC office at cgraham@sun.ac.za.

Sincerely,

Clarissa Graham

REC Coordinator: Research Ethics Committee: Human Research (Humanities)

National Health Research Ethics Committee (NHREC) registration number: REC-050411-032. The Research Ethics Committee: Humanities complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research:

Principles Structures and Processes (2nd Ed.) 2015. Annually a number of projects may be selected randomly for an external audit.

----- Forwarded message -----

From: **Graham, CJ, Ms** <cgraham@sun.ac.za> <cgraham@sun.ac.za>

Date: Mon, 9 Apr 2018 at 09:05

Subject: RE: Feedback from REC: CUR-2018-1877; Student satisfaction with a blended learning approach: implementation evaluation of three Honours programmes in Education.

To: Jeanette Barry <jeanettebarry00@gmail.com>

Dear Jeanette

You may only send the survey once you have permission from the SU Division for Information Governance (permission@sun.ac.za). Have you received their permission? If so, please upload proof of permission to your application by responding to the stipulation (online). If not, please contact the aforementioned Division as soon as possible to start the permission process.

You have ethics clearance from the REC, but to send out the survey, you need permission from the aforementioned Division who is the gatekeeper to the SU staff and students.

Kind regards

Ms Clarissa Graham | MA International Studies, PG Dip Social Science Methods

Coordinator: Research Ethics (Human Research) | Koördineerder: Navorsingsetiek (Mensnavorsing)

Division for Research Development | Afdeling vir Navorsingsontwikkeling

e: cgraham@sun.ac.za | t: +27 21 808 9183 | a: RW Wilcocks building, Ryneveld Street



NOTICE OF APPROVAL

REC Humanities New Application Form

6 July 2018

Project number: 1877

Project Title: Student satisfaction with a blended learning approach: implementation evaluation of three Honours programmes in Education.

Dear Miss Jeanette Barry

Your response to stipulations submitted on 6 July 2018 was reviewed and approved by the REC: Humanities.

Please note the following for your approved submission:

Ethics approval period:

| Protocol approval date (Humanities) | Protocol expiration date (Humanities) |
|-------------------------------------|---------------------------------------|
| 26 March 2018 | 25 March 2021 |

GENERAL COMMENTS:

Please take note of the General Investigator Responsibilities attached to this letter. You may commence with your research after complying fully with these guidelines.

If the researcher deviates in any way from the proposal approved by the REC: Humanities, the researcher must notify the REC of these changes.

Please use your SU project number (1877) on any documents or correspondence with the REC concerning your project.

Please note that the REC has the prerogative and authority to ask further questions, seek additional information, require further modifications, or monitor the conduct of your research and the consent process.

FOR CONTINUATION OF PROJECTS AFTER REC APPROVAL PERIOD

Please note that a progress report should be submitted to the Research Ethics Committee: Humanities before the approval period has expired if a continuation of ethics approval is required. The Committee will then consider the continuation of the project for a further year (if necessary)

Included Documents:

| Document Type | File Name | Date | Version |
|-----------------------|--|--------------|---------|
| Data collection tool | 14535602 J Barry Institutional Permission Standard Agreement IRPSD 738 | 22/03/2018 | v2 |
| Research | 14535602 J Barry MPhil proposal (22 March 2018) | 22/03/2018 | V3 |
| Protocol/Proposal | | | |
| Data collection tool | Jeanette SUNSurvey - Student satisfaction with a blended learning approach (22 April 2018) | 22/04/2018 | V3 |
| Proof of permission | Institutional Permission Standard Agreement IRPSD 738 | 24/04/2018 | V1 |
| Data collection tool | 14535602 J Barry - SU HUMANITIES Consent form (interviews with facilitators) 28 May 2018 | 28/05/2018 | V3 |
| Data collection tool | Interview protocol for individual interviews (facilitators, lecturers, support staff) | 28/05/2018 | V2 |
| Data collection tool | Changes requested REC-2018-1877 (response letter) | 06/07/2018 | v3 |
| Data collection tool | 14535602 J Barry - SU HUMANITIES Consent form (students) | 06/07/2018 | v3 |
| Data collection tool | Changes requested REC-2018-1877 (response letter) | 06/07/2018 | |
| Informed Consent Form | 14535602 J Barry - SU HUMANITIES Consent form (students) | 06/07/2018v3 | |
| Informed Consent Form | Changes requested REC-2018-1877 (response letter) | 06/07/2018 | |
| Informed Consent Form | Consent to Participate in Research (individual interview) | 06/07/2018 | |
| Default | Changes requested REC-2018-1877 (response letter) | 06/07/2018 | |

Page 1 of 3

If you have any questions or need further help, please contact the REC office at cgraham@sun.ac.za.

Sincerely, Clarissa Graham

REC Coordinator: Research Ethics Committee: Human Research (Humanities)

National Health Research Ethics Committee (NHREC) registration number: REC-050411-032. The Research Ethics Committee: Humanities complies with the SA National Health Act No.61 2003 as it pertains to health research. In addition, this committee abides by the ethical norms and principles for research established by the Declaration of Helsinki (2013) and the Department of Health Guidelines for Ethical Research:

Principles Structures and Processes (2nd Ed.) 2015. Annually a number of projects may be selected randomly for an external audit.

Investigator Responsibilities

Protection of Human Research Participants

Some of the general responsibilities' investigators have when conducting research involving human participants are listed below:

1. Conducting the Research. You are responsible for making sure that the research is conducted according to the REC approved research protocol. You are also responsible for the actions of all your co-investigators and research staff involved with this research. You must also ensure that the research is conducted within the standards of your field of research.

2. Participant Enrollment. You may not recruit or enroll participants prior to the REC approval date or after the expiration date of REC approval. All recruitment materials for any form of media must be approved by the REC prior to their use.

3. Informed Consent. You are responsible for obtaining and documenting effective informed consent using **only** the REC-approved consent documents/process, and for ensuring that no human participants are involved in research prior to obtaining their informed consent. Please give all participants copies of the signed informed consent documents. Keep the originals in your secured research files for at least five (5) years.

4. Continuing Review. The REC must review and approve all REC-approved research proposals at intervals appropriate to the degree of risk but not less than once per year. There is **no grace period**. Prior to the date on which the REC approval of the research expires, **it is your responsibility to submit the progress report in a timely fashion to ensure a lapse in REC approval does not occur**. If REC approval of your research lapses, you must stop new participant enrollment, and contact the REC office immediately.

5. Amendments and Changes. If you wish to amend or change any aspect of your research (such as research design, interventions or procedures, participant population, informed consent document, instruments, surveys or recruiting material), you must submit the amendment to the REC for review using the current Amendment Form. You **may not initiate** any amendments or changes to your research without first obtaining written REC review and approval. The **only exception** is when it is necessary to eliminate apparent immediate hazards to participants and the REC should be immediately informed of this necessity.

6. Adverse or Unanticipated Events. Any serious adverse events, participant complaints, and all unanticipated problems that involve risks to participants or others, as well as any research related injuries, occurring at this institution or at other performance sites must be reported to Malene Fouche within **five (5) days** of discovery of the incident. You must also report any instances of serious or continuing problems, or non-compliance with the RECs requirements for protecting human research participants. The only exception to this policy is that the death of a research participant must be reported in accordance with the Stellenbosch University Research Ethics Committee Standard Operating Procedures. All reportable events should be submitted to the REC using the Serious Adverse Event Report Form.

7. Research Record Keeping. You must keep the following research related records, at a minimum, in a secure location for a minimum of five years: the REC approved research proposal and all

amendments; all informed consent documents; recruiting materials; continuing review reports; adverse or unanticipated events; and all correspondence from the REC

8.Provision of Counselling or emergency support. When a dedicated counsellor or psychologist provides support to a participant without prior REC review and approval, to the extent permitted by law, such activities will not be recognised as research nor the data used in support of research. Such cases should be indicated in the progress report or final report.

9.Final reports. When you have completed (no further participant enrollment, interactions or interventions) or stopped work on your research, you must submit a Final Report to the REC.

10.On-Site Evaluations, Inspections, or Audits. If you are notified that your research will be reviewed or audited by the sponsor or any other external agency or any internal group, you must inform the REC immediately of the impending audit/evaluation.

ADDENDUM G: UTILISATION-FOCUSED EVALUATION

CHECKLIST (PATTON, 2012)

| | |
|---------|--|
| Step 1 | Assess and build programme and organisational readiness for utilisation-focused evaluation. |
| Step 2 | Assess and enhance evaluator readiness and competence to undertake a utilisation focused evaluation. |
| Step 3 | Identify, organise, and engage primary intended users. |
| Step 4 | Conduct situation analysis with primary intended users. |
| Step 5 | Identify primary intended uses by establishing the evaluation's priority purposes. |
| Step 6 | Consider and build in process uses if appropriate. |
| Step 7 | Focus priority evaluation questions. |
| Step 8 | Check that fundamental areas for evaluation inquiry are being adequately addressed. |
| Step 9 | Determine what intervention model or theory of change is being evaluated. |
| Step 10 | Negotiate appropriate methods to generate credible findings and support intended use by intended users. |
| Step 11 | Make sure intended users understand potential controversies about methods and their implications. |
| Step 12 | Simulate use of findings. |
| Step 13 | Gather data with ongoing attention to use. |
| Step 14 | Organise and present the data for use by primary intended users. |
| Step 15 | Prepare an evaluation report to facilitate use and disseminate significant findings to expand influence. |
| Step 16 | Follow up with primary intended users to facilitate and enhance use. |
| Step 17 | Meta-evaluation of use: Be accountable, learn, and improve |

